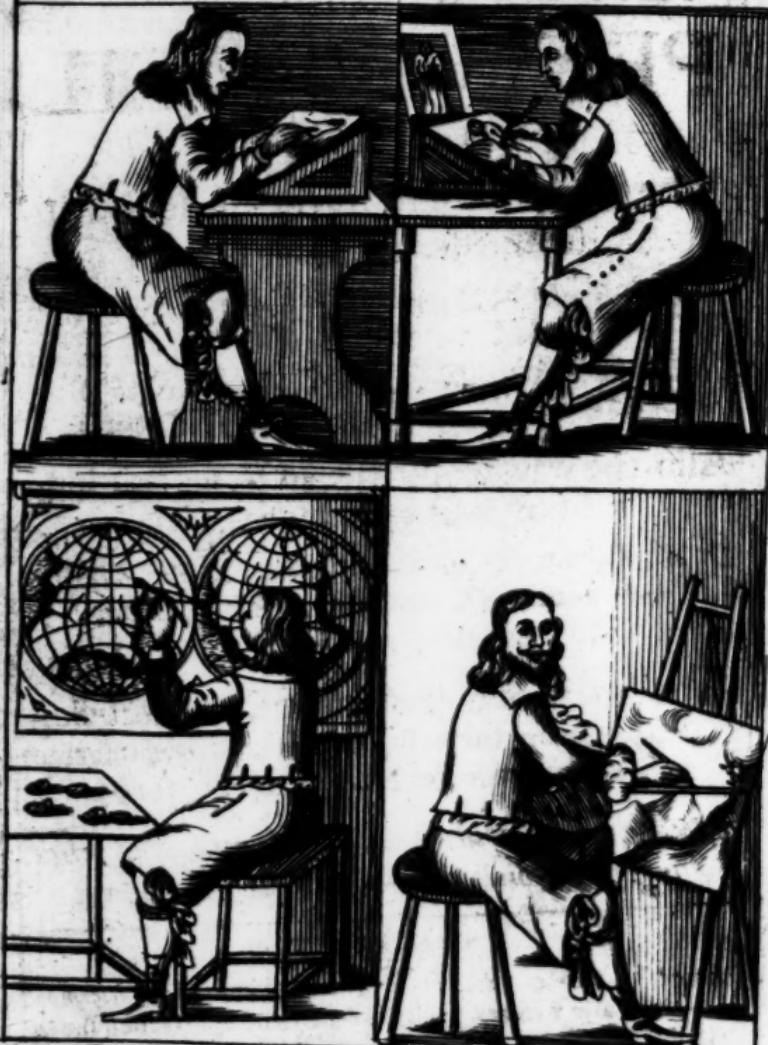


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## To the R E A D E R.



Mong the many Operations of Mysterious Nature, the Intellectual Part of Man hath no equal: Among the multifarious Productions of Man's Understanding, the Art of LIMNING is by none excelled; whether we consider the Grandeur of Spirit therein expressed, or the Ingenious Delight thereby acquired. What Ray of the Great Creator's Image is more conspicuous in the Soul of Man, than that of Intense Desire to produce Creatures of his own? And wherein is that Inclination so compleatly answered, as by Delineating the Workmanship of God in Artificial Resemblances contrived and wrought by his proper Wit? Nor can any Satisfaction equal what is derived from the Perfection of these Designs. Are the Proportions exact? How strongly do they attract the Eye? Be the Shadowings accurate? How strangely do they affect the Mind? But if the Artist hath stoln so much of Promethean Fire as to add the Excellency of Life to

## To the Reader.

well-disposed Lineaments, representing the Native Air and brightly Gesture of the Person in vive; How unspeakably doth he gratify both?

To exercise this Faculty and comply with this Fancy in Man, is this little Tract compiled, in Five Books.

The First lays down the Primordial Rudiments of the Art of Drawing with the Pen and Pastils: In a due and orderly Method proposing the Description of Man's Body in its distinct parts, presenting sundry Draughts of them in the plain Circumferential Lines; and giving Directions for the Proper Shades, as of Naked Bodies, so of Drapery; by Instructions and Copies so easy and intelligible, that the meanest Capacity need not doubt to undertake the Drawing of that Admirable Fabrick, and arrive to the Perfection of this Mystery in exact Symmetry, suitable Proportions, and enlivening Postures, if well perus'd and practised. For which purpose also certain Geometrical Rules, Definitions, and Figures are inserted, to exemplify and adorn this Mistress of proportion; in the Accomplishing whereof that nothing may be defective, some succinct Avertissements concerning Landskip are added in the Close.

Having premised these more plain and easy Fundamentals, the Second proceeds to discover the Secret and Ingenious Skill of Etching with Aqua fortis; where the most perspicuous and familiar Ground possible is described, and Prescriptions, for carrying on and perfecting that Work, no less Rational annexed. And for as much as some may perhaps take more Pleasure in, or reap more Profit from, that of Gra-

ving;

## To the Reader.

ving; you have the Instruments most Necessary in that kind, and the Manner of Using them most Convenient, particularly demonstrated; Together with that abstruse Slight of transferring the Copy upon the Copper.

But because this alone may seem barely Mechanick, that which suits with the most Gentle, and can not derogate from the most Honourable, is offered in the Third; where the Requisites for Limning in Water-Colours are deposited, the Gums and their Waters in few Words digested, the Colours particularly nominated, and the true way to prepare and compound them specified: All which are but as so many Degrees and Ingredients to approach and accomplish the desirable and ultimate Design of Miniature; for the Practice whereof you are thoroughly furnished with the Choice of the meetest Light, Position, and Implements at hand, by the particular Description of Drawing a Face to the Life in little, according to its duly methodized Progress at the first, second, and third Sitting; nor omitting the Ornaments thereunto pertaining.

And to supply the Fading and Decay of these, the Fourth delivers Rules and Directions for Painting in Oyl, answerable to that depth of Judgement required in that more durable kind of Operation; naming the proper Colours, and declaring its peculiar Utensils, with accurate Instructions how to temper and diversifie the former, for all Complexions and Garments, of what variety soever; and to use the later in the Artificial Painting of a Face, the only Exemplar prescribed, because it includes all the Art and Difficulty of this Science.

## To the Reader,

The Fifth, and last, displays a pretty superficial Experiment ; imparting what Colours and other Necessaries are best fitted for the Washing or Colouring of Maps and Printed Pictures : And, to help the divers Exigencies that concern this Affair, some Expedients put a Period to the whole Work.

Plainness and Brevity ( which may procure Contempt from the Nice or Vulgar ) are sufficient to recommend this Piece to Ingenious Aspirers after any of those Excellencies therein taught ; since they have done the Art and Artist Right, in rescuing both, from such obscure Intricacies and voluminous Imperficiencies as would discourage the one, or disparage the other : And these Monuments have so justly prevented all Censure, that nothing can suggest the least Imputation of Difficulty but want of Diligence, nor any one surmise it Tedious but the Slothfull.

Farewell.

---

A



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## C H A P. I.

*A description of all the External parts  
of Man's Body.*S E C T. I. *Of the H E A D.*

In Man's body the highest part is the *H E A D*; the fore-part is called the *Forehead*; the turning of the hair, the *Crown*; the root of the hair above the forehead, the *Center*; the parting of the hair, (especially of Women) is called the *Seam*.

The *Forehead* containeth all the space between the root of the hair before, and the eye-browes: the *Pulse* is the highest part of the forehead, ending with the hair: *Metone* is the swelling out in the forehead above the eye-browes: the *Temples* lye betwixt the pulse, the forehead, and the ear.

S E C T. II. *Of the E A R.*

**T**He *E A R* turns between the temples, the upper part of the cheek, and the root of the hair; by the side of the head the lower part is called the *sipp*, in the midst whereof is the hole where the sound entreth in.

S E C T.

---

S E C T. III. *Of the E Y E S.*

The *EYE-BROWES* are those thick hairs at the bottom of the forehead: the *upper eye-lid* is that little part which compasseth the upper part of the eye: the *eye* is that round ball which is contained between the upper and lower eye-lids: the *black of the eye* is the round spot in the midst of that little circle, by virtue whereof we see, and is called the *apple or sight of the eye*: the outward corner of the eye is next the ear, the inner is toward the nose; all the space between the upper eye-lid and the outward corner of the eye, and the whole turning of the eye to the upper part of the cheek is called the *case or hollow of the eye*.

---

S E C T. IV. *Of the N O S E, M O U T H,*  
*C H I N, N E C K, and T H R O A T.*

The *N O S E* is between the cheeks, descending from betwixt the eyes, and endeth at the nostrils which hang out on each side at the bottom thereof, each whereof hath an hole or passage, whereby we smell.

The lower end of the nose which standeth forward is called the *top or point*, the rising in the midst the *ridge or gristle*; the upper Cheek is that space between the ear, the hollow of the eye, the nose,

## The Excellency of

and the lower Cheek ; whereof the part rising towards the eye, is named the *ball* : the lower Cheek is bounded with the upper, the nostrils, the mouth, the chin, to the throat and the neck under the ear : the *Upper lip* is that red piece of flesh above the mouth.

The *MOUTH* is that division between the upper and neither lipps, which is red like the other ; that concavity which cometh down from the bottom of the nose to the upper lip, is the *gutter of the nose*.

The *roof* of the mouth is called the *pallat* ; the *tongue* is that which moveth in the mouth ; the *passage* between the lungs and the mouth is called the *Wind-pipe*, through which the breath passeth ; the *gum* is that piece of flesh in which the teeth are fastned ; the four first whereof are called *dividers*, next unto which on each side are the *dog-teeth* ; the other five on each side with their roots, are the *grinders* or *cheek-teeth* ; so that the full number of Teeth is thirty two.

The *CHIN* or place of the *beard*, is the extremity beneath the lip and the end of the face, whose beginning is the root of the hair.

The hinder part of the head under the crown is called the *nape*, where the hairs grow ; behind is the beginning of the neck.

The *THROAT* is between the chin and the beginning of the body or trunk, in the midst whereof is that rising called the *throat-bone* ; the concavity of the neck before, between the end of the throat and the beginning of the breast, is the *throat-pit*.

The

The *NECK* is that part behind between the root of the hair and the beginning of the back-bone, which on either side is joyned with the throat, and at the lower end of the neck with the shoulders, whereof the bone in the midst is called *astragalus*, or the bone that knits the neck with the shoulders; the whole trunk or body before containeth the upper fork of the stomach or breast, which begins at the end of the throat-pit.

---

S E C T. V. *Of the FORE-PART  
of the Body.*

The fore-part of the body, as the *Breasts* or *Papps*, end with the short ribs, and they are called the part under the papps, and in Women are called *duggs*, the heads of which whence the milk is suckt out are called *Nipples*; the space between the breasts or duggs at the lower fork of the breast is the *chest*; the *arm-pits* are the hollows under the armes, where the hairs grow.

The Short-ribbs begin at the end of the papps, and reach to the flanks near the belly; the Flanks begin at the end of the breast, and are called the *waste*; the upper part of the belly lies between the hollow of the breast, the waste above, the navel, and the ribbs; the knitting of the intrails is called the *Navel*.

The *Paunch* lieth between the waste, the privities, and the flanks, and is also called the *Belly*; especially in Women; where the hairs grow under the

A 3 belly,

belly, is the Privities; the hollow compass at the top is called *Corona*, the place which the urine passeth through is called the *Hole*, the two little balls that hang under the Yard the *Stones*, the Privities of a Woman are called, &c.

---

**SECT. VI.** *Of the HINDER-PART  
of the Body.*

**T**He hinder part of the body called the *Back* or *Chine* consists of the *Shoulder-blade*, which is the part behind the shoulders end, with part of the chine and loynes; the rest of the back reacheth down along from the neck to the beginning of the cleft of the buttocks, the loynes lie between the shoulder-blades; the *ribbs* and the rest of the chine to the *reins* or *waste*.

The *REINES* reach from the loynes to the buttocks, and do properly belong to the part below the *Waste*.

The *BUTTOCKS* are that fleshy part which serve us for sitting.

---

**SECT. VII.** *Of the ARMES, HANDS,  
and FINGERS.*

**T**He *Arme* contains the shoulder, behind which is the back, beginning between the neck and throat, and reacheth to the shoulder-blade, behind which place is properly called the *Back*; the part of

of the arme from the elbow upward, is called the *upper brawn* of the arme; the *Elbow* is the bowing of the arme, the inside whereof is the *joynt*; and at the lower part of the arme begins the *wrist*, where the arme is joyned to the hand, the *palm* is the inside of the hand between the wrist and the fingers, the *thumb* is the biggest and shortest of the fingers.

The *Fore-finger* is next to the thumb, the *middle-finger* is that which stands in the midst, and is longer then the rest; next unto this is the *Ring-finger*, the *Ear-finger* or *Little-finger* is the least and last.

The *joynts* of the fingers are even in number, *viz.* three upon each, except the thumb, which hath but two.

The hinder part of the arme reacheth from the end of the shoulder or arme-pit to the elbow, where the second part of the arme beginneth, reaching to the wrist-joynt.

The back of the hand reacheth from the wrist to the first joynts of the fingers, and is called *Pecten*, the spaces between the joynts are called *Internodi*, which are two upon each finger, except the thumb, which hath but one; in the space between the last joynt and the top of the finger is the *Nail*, whose bowing is called *Corona*, (I mean where it toucheth the flesh or skin.

The whole hand begins at the wrist, and reacheth to the top or extremity of the fingers.

---

**SECT. VIII. Of the LEGS, FEET,  
and TOES.**

**T**HE *LEG* consists of these parts; the *thigh*, which begins at the trunk of the body, and ends at the *knee*; the hollow of the thigh is the inner side below the *privities*; the *knee* begins at the round bone at the end of the *thigh*, and reaches to the beginning of the *shin-bone*; the *instep* begins at the end of the *shin-bone*, and reaches to the beginning of the *toes*, and is called the *upper part of the foot*, the *ankle* is that bone which buncheth out on each side between the *instep* and beginning of the *heel*.

The *Small of the leg* is the space between the end of the two *calves* above, and the *ankle*, *instep*, and *heel* below; the *Pit of the foot* is the hollow under the *hill* or higher bunch of the foot towards the *soles*.

The *TOES* have also *joynts* as the *fingers*, though they be somewhat shorter, and have also *nails* in like manner, and are otherwise called, as  
1. 2. 3. 4. 5.

The *hinder part of the leg* begins under the *buttock*, and is called the *thigh*, and endeth at the *hinder part of the knee*, called the *hamme* or *bending*; the *calves of the legs* begin under the *hamme*, and are two upon each leg; the *outward*, which endeth somewhat high; and the *inward*, which reacheth nearer to the *small of the leg*, which diminisheth by

by degrees to that part a little above the ankle; the *heel* is that part of the foot which riseth out backwards, reaching from the end of the leg to the bottom of the foot, called the *Sole*, which beginneth at the end of the heel, and reacheth to the top of the toes, containing likewise the spaces between the joyns underneath orderly. Thus much for the External parts of Mans Body; all which are deciphered in the Sculptures following.

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## C H A P. I I.

*Of Actions, Gestures, Decorum, Motion, Spirit,  
and Grace in Pictures rightly resembled.*

S E C T. I. *Of Actions or Gestures.*

**T**Hese are those that most nearly resemble the life, be it either in laughing, grieving, sleeping, fighting, wrastling, running, leaping, and the like.

Amongst the Ancients, famous for lively motion and gesture, *Leonard Vincent* deserves much, whose custom was to behold clowns, condemned persons, and did mark the contracting of their browes, the motions of their eyes and whole bodies; and doubtless it cannot but be very expedient for an Artist in this kind to behold the variety of exercises, that discover various actions, where the motion is discovered between the living and the dead, the fierce and the gentle, the ignorant and learned, the sad and the merry.

Jubm

*John de Bruges was the first inventor of Oyl-painting that deserved excellently in this particular.*

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**SECT. II. Of the Passions or Complexions.**

**M**AN'S Body is composed of the four Elements.

*Melancholy resembles Earth.*

*Flegm the Water.*

*Choler the Fire.*

*Blood the Air;* and answerable are the Gestures and Humours.

*Melancholy* bodies are slow, heavy, and restrained; and the consequents are anxiety, disquietness, sadness, stubbornness, &c. in which horrour and despair will appear.

*Flegmatick* bodies are simple, humble, mercifull.

*Sanguine* bodies are temperate, modest, gracious, princely, gentle, and merry; to whom these affections of the minde best agree, *viz.* love, delight, pleasure, desire, mirth, and hope.

*Cholerick* bodies are violent, boysterous, arrogant, bold, and fierce; to whom these passions appertain, anger, hatred, and boldness; and accordingly the skilfull Artist expresseth these motions of these several bodies, which ought Philosophically to be understood.

Now to proceed according to our promised Method, to the Practical part; and here first the Learner must be provided with several Instruments.

C H A P.

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C H A P. III.

*Of necessary Instruments appertaining  
to Drawing.*

1. **S**Allow coals split into the forms of Pencils, which you may best have of those that sell Charcoal ready burnt for your use; these are to be prepared by sharpening them at the point, their use is to touch over your Draught lightly at the first: you may know Sallow coals from others by the fineness of their grain.

2. You must also have a Feather of a Ducks wing, with which you may wipe out at pleasure what you desire to alter in your Draught.

3. Black-lead Pencils, to go over your Draught more exactly the second time.

4. Pens made of a Ravens quill, to finish your design; which will strike a more neat stroke then the common quill: but you must be very exact here, for there is no altering what you do with the Pen.

5. A Rule and a pair of Compasses with three Points to take in and out; one for Chalk, another for Black lead, or red Chalk, or any other Paste. The use of the Compasses is required in most things you draw, which you are to use after your out-stroke is done, by trying how near your Draught and Pattern agree, and this being only toucht out in Charcoal, you may alter at pleasure.

6. Pastils

6. Pastils made of several Colours, to draw upon coloured Paper or Parchment, the making whereof is as followeth.

*How to make Pastils of several colours.*

Take the Colour that you intend to make your Pastil and grind it dry, or rather only bruise it somewhat fine; to your Colour (whatsoever it be) add a reasonable quantity of Plaister of *Paris* burnt and finely sifted, mix and incorporate the Colour and Plaister together with fair Water till it be stiff like Clay or Dough; then take it and rowl it between your hands into long pieces, about the bignes of the shank of a Tobacco-pipe, then lay them in the Sun or Wind to dry. They being thus dried are ready for use, being finely scraped to a very small point; and if they be short, put them into an ordinary Goose-quill to lengthen them.

And here note, that you may by this means make Pastils of what Colour you please, either simple or compounded, if you know what ingredients and mixtures will make such a Colour as you desire; which you will understand in the third Book, where we treat of the Mixture of Colours. And further observe, that the Plaister of *Paris* is only to binde the Colours together; and therefore according as your Colour or Colours you are to make are more hard or more soft, you must add the greater or lesser quantity of Plaister.

By this means of tempering and mixing of several Colours together, you may make (indeed) whatsoever

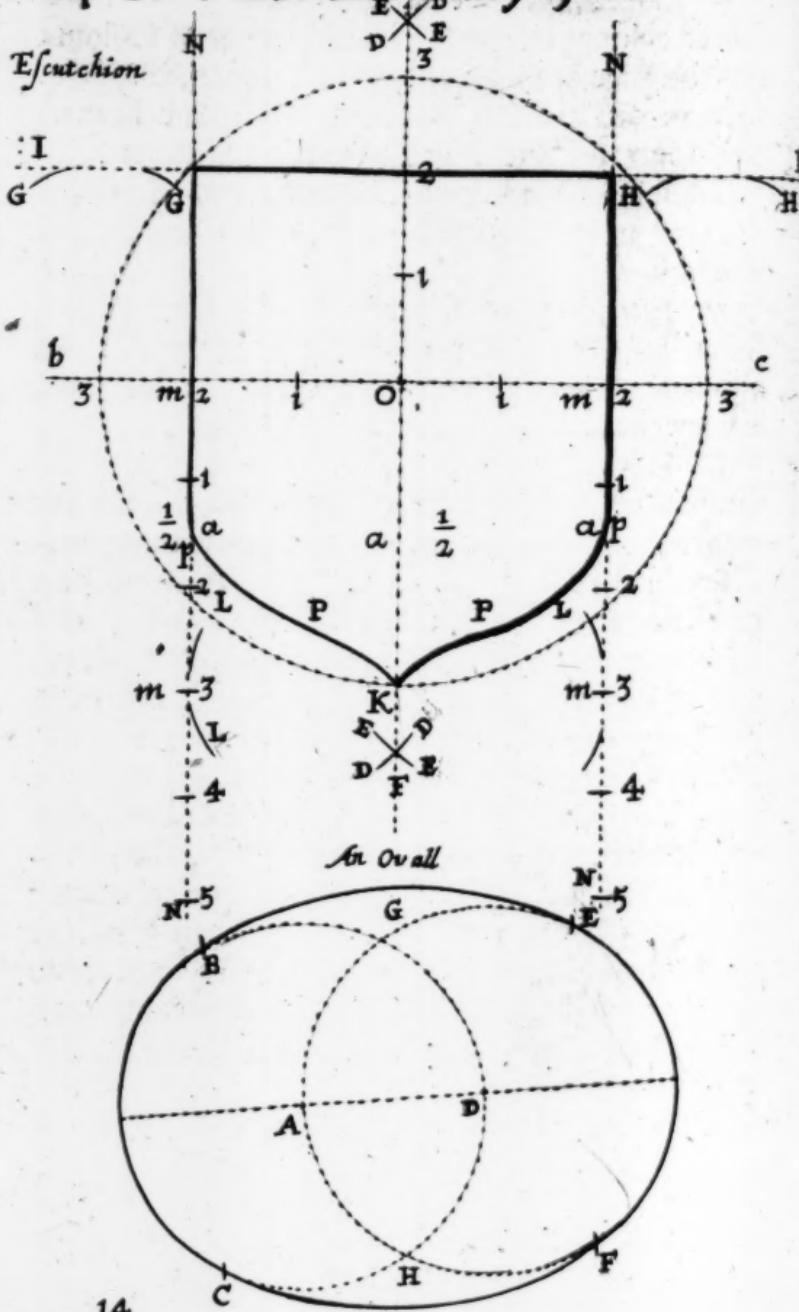
soever colour you please ; as all manner of Colours for the Face or Bodie of Man or Woman, all kind of Greens for Landskip, for Rocks, Skies, Sun-beams ; all colours for Buildings , with their Shadows.

These Pastils are very fine and commodious for drawing upon coloured paper, and therefore I would have you,

7. Provide your self also of fine Blew paper, some light-coloured, other-some more sad ; as also with Paper of divers other colours, which now is very common to be sold in many places.

8. Have alwayes in a readiness by you the Crumbs of fine Manchet or White-bread ; the use whereof is, when you have drawn any thing with Black-lead that disliketh you, you may strew some of these Crumbs upon the defective part , and with a linnen cloth rub hard upon that place, and it will fetch out the Black-lead , and leave the Paper or Parchment fair and white. It is also usefull when you have finished a piece, either Head, Leg, Arme, or whole Bodie with Black-lead, and would trace it over with Ink to finish it , the Black-lead will be seen in many places, being thicker then the line of your Pen ; wherefore when you have finished your Drawing with Ink, and that dry, rub it over with these Crumbs, and it will not only take off the superfluous Black-lead, but all other spots of your Paper.



*The Excellency of*

*A way to Draw an Escutcheon Geometrically.*

**F**irst strike a Circle at pleasure, as your occasion requires.

Then strike the Diameter as B C, then set one foot of the Compasses in B, and strike the crooked lines D D and D D, then keeping the Compasses at the same distance, strike the other crooked lines E E and E E, then where they do intersect as F F, there strike the cross Diameter, then divide the upper Semidiameter into three parts, and take two of them, there make the Cross-line, by setting one foot of the Compasses in B, and make the crooked line G G, then at the same distance make the crooked line H H, by setting them in C, then strike the line I I, then measure two or three of those parts, and set off towards B and C, then set the Compasses in K, and strike the lines L L and L L, then set the Ruler in M M and M M, and strike the lines in N N and N N, and divide the lower Semicircle in two equal parts, then set the Compass in O, and strike the lines P P and P P from A A, then measure from M N downwards, five of those parts of the upper measure, then set the Compasses at N 5 and N 5, and strike the lines K P and K P, and you have your desire.

*To Draw a Geometrical Oval.*

**T**HIS Oval is drawn by drawing two equal Circles, then set the Compasses in D, and strike the

the Arch B C, and at the same distance set them in D, and strike the Arch F E, then set them in G, and strike the Arch C F, then set them in H, and strike the Arch B E.

*Some Geometrical Definitions.*

1. **A** Point is void of magnitude.
2. A Line is a length without breadth or thickness ; and of the three kinds of magnitudes in Geometry, *viz.* Length, Breadth, and Thickness, a Line is the first.
3. The ends or bounds of a Finite-line are points; but in a circular Line, the points motion returns to the place where it first began, and so makes the Line infinite, and the ends or bounds undeterminate.
4. A Right-line lyeth equally betwixt his points.
5. A Superficies hath onely Length and Breadth.
6. A plain Superficies is that which lyeth equally between his Lines.
7. A plain Angle is the inclination, or bowing of two Lines the one to the other, the one touching the other, and not being directly joyned together : an Angle commonly signed by three Letters, the middlemost whereof shews the Angular point.
8. If the Lines that contain the Angle be right Lines, then it is called a Right-lined Angle.
9. When a Right-line standing upon a Right-line, makes the Angles on either side equal, then either of these Angles is a Right-angle, and Right-line which

which stands erected, is called a Perpendicular-Line to that wherein it stands.

10. An Obtuse-angle is that which is greater than a Right-angle.

11. An Acute-angle is less than a Right-angle.

12. A Limit or Term, is the end of every thing.

13. A Figure is that which is contained under one Limit or Term, or many, *viz.* a Round-line, three Right-lines, four Right-lines, five Right-lines, &c.

14. A Circle is a plain figure contained under one Line, called a Circumference.

15. A Diameter of a Circle is a Right-line drawn by the Center thereof, and ending at the Circumference.

16. A Semi-circle is a figure contained under the Diameter, and that part of the Circumference cut off by the Diameter.

17. A Section or portion of a Circle, is a figure contained under a Right-line, and a part of the Circumference greater or less than a Semi-circle.

18. Right-lined figures are such as are contained under Right lines.

19. Three-sided figures are such as are contained under three Right lines.

20. Four-sided figures are such as are contained under four Right lines.

21. Many-sided figures are such as have more sides than four.

22. All-three-sided figures are called Triangles.

23. Four-sided figures are Quadrilater; a Square is that whose Sides are equal, and his Angles right.

24. A Long-square is that which hath right Angles, but unequal Sides.

25. A Rhombus is a figure having four equal Sides, but not right Angles.

26. A Rhomboides is a figure whose opposite Sides are equal, and whose opposite Angles are also equal, but it hath neither Sides, nor equal Angles.

27. All other figures of four sides, besides these, are called Trapez, as such are all figures of four sides, in which is observed no equality of Sides or Angles.

28. Parallel or equi-distant Right-lines are such, which being in one and the same Superficies, and produced infinitely on both sides, do never in any part concurr, but still retain the same distance.

## C H A P. I V.

### *Of the first Practice of Drawing.*

#### SECT. I. *Of Geometrical Figures.*

B eing provided of all necessary Instruments for Drawing, proceed to Practice; and first begin with plain Geometrical figures, such as the Circle, Oval, Square, Triangle, Cone, Cylinder; all which your Rule and Compasses will help you in: but first endeavour to draw them by hand, which with a little practice you may attain. I have my self, by taking a Black-lead Pencil in my hand, and holding it as I do a Pen, and resting the end of my

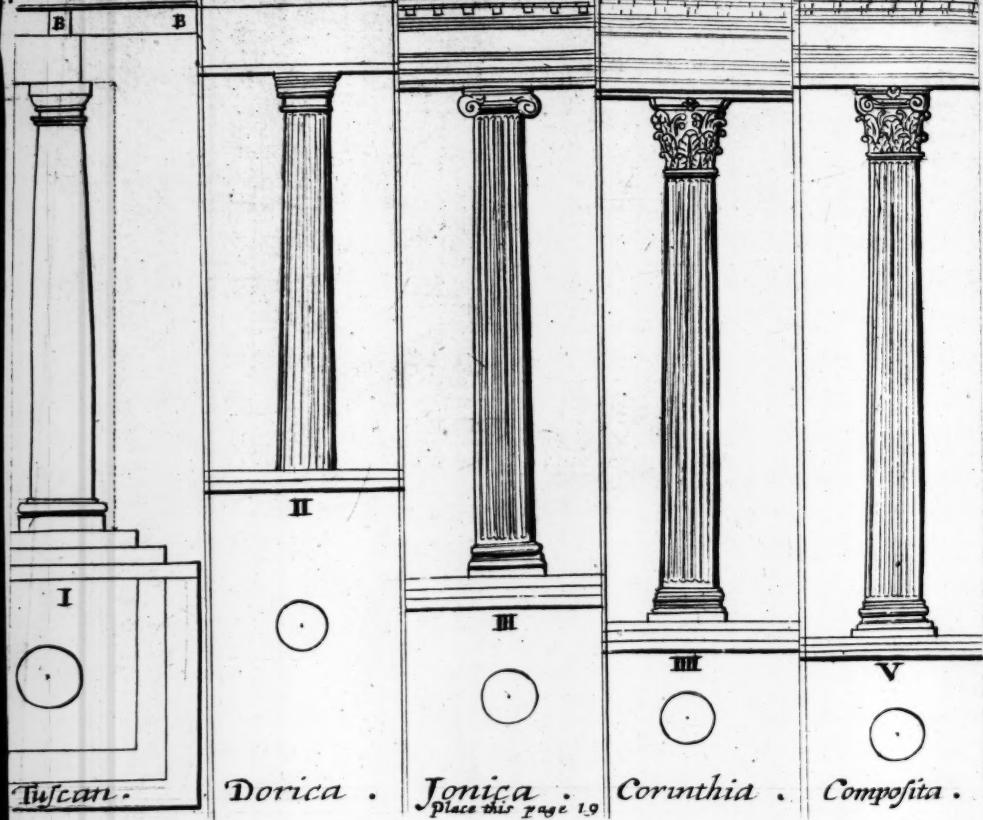
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# THE V: ORDERS OF ARCHITECT.

*Tullianus Inventor*



*Tuscan.*

*Dorica .*

*Ionica*  
place this page 19

*Corinthia .*

*Composita .*

little finger upon my paper , turning the paper about with my left hand , and have described a Circle so exact , that a pair of Compasses could not discover an error : I say , practice the making and drawing of these by hand , for they are all usefull in one kind or other . *Example.*

The *Circle* will help you in all *Orbicular forms* ; as , the *Sun* in its glory , the *Moon* either *full* or *crescent* , and infinite other Circular shapes . The *Oval* is a direction for the *Face* , for the *mouth* or *foot* of a *wine* or *beer-glass* , the *mouth* of a *Well* ; &c . The *Square* is assistant to you in confining your Picture you are to copie , and keeping it within bounds . The *Triangle* for the half-face , as in the Figures following you will easily discern . The *Cone* will help you in drawing of *Flute-Colasses* , now much in fashion ; as also in *Spire-Steeple*s and tops of *Towers* . The *Cylinder* will be of good use in drawing of all manner of *Columns* , *Pillars* and *Pilasters* , with their *Ornaments* . These ( indeed ) are so usefull , that hardly any thing can be effected in which they they are not ingredient .

And now , since it falls in my way so opportunely , I will insert the sign of the Five orders of Architecture , that you may know them when you see them either painted , or built in Brick or Stone .

*Place here the Five Columns of Architecture.*

**S E C T. II.** *Of the second practice of Drawing.*

**H**aving practised these Figures, proceed to the drawing of *Cherries, Pears, Apples, Apricocks, Peaches, Grapes, Strawberries, Peascods, Butterflies*, and such like.

**S E C T. III.** *Of the third Practice.*

**I**mitate *Flowers*, as *Roses, Tulips, Carnations, &c.* Also *Beasts*; first the more heavy and dull, as the *Elephant, the Bear, the Bull, the Goat, the Sheep, &c.* Then them more fleet and nimble, as the *Stag, the Hart, the Nag, the Unicorn, and the like.* Then practice *Birds*, as the *Eagle, the Swan, the Parrot, the King-fisher, the Partridge, the Pheasant, and such like.* Then *Fishes*, as the *whale, Salmon, Herring, Pike, Carp, Thornback, Lobster, &c.* Of all which there are Books to be bought at very reasonable rates.

**S E C T. IV.** *Of the fourth Practice.*

**I**mitate the *Pody and Parts of the Body of Man; in the practice whereof beware of the common errors usually committed, as of drawing the Head*

too

too big for the Body, and others the like ; which to prevent, you have here presented to your view the Heads, Noses, Mouthes, Hands, Arms, Feet, Legs, Bodies ; also whole Figures of Men, Women, and Children in several postures, being Copies of the best Masters extant, with Rules and directions for Drawing every particular member of the bodie, and that I would have you now to practice, you having gone sufficiently forward with the others before noted.

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## C H A P. V.

*Directions for Drawing the Body of Man  
or Woman.*SECT. I *General Rules for Drawing the Face.*

**I**N Drawing the Face, observe its motion whether forward, upward, downward, or sideways, by your Eye ; touch lightly the features where the Eyes, Nose, Mouth, and Chin should stand, and then go over them more perfectly. The Circle, Squares, and Triangles that are used in a Face, serve to guide your judgement where to place the several features.

Observe diligently the principal Muscles of a Face, these appear most in an aged man or womans face.

There is usually a three-fold proportion observed

*The Excellency of*

in a Face : 1. From the top of the Fore-head to the Eye-browes : 2. From the Eye-browes to the bottom of the Nose : 3. From thence to the bottom of the Chin ; but in some the Fore-head is lower ; others Noses are longer.

The Distances between the Eyes, is the length of one Eye in a full face ; but in a three-quarter, or side-face, the distance is lessened answerable.

The Nostril ought to be plac'd exactly against the corner of the Eye.

In a fat Face you will perceive the Cheeks swell, in a lean Face the Jaw-bones stick out, and the Cheeks fall in.

A smiling countenance is discerned by the Mouth, when the corners of the Mouth turn up a little.

A frowning countenance is discerned in the Fore-head, Eye-browes, bending and somewhat wrinkling about the top of the Nose, &c.

### *SECT. II. To draw a Fore-right Face.*

**M**ake the form of a perfect Oval divided into three equal parts by two Lines ; in the first part place the Eyes, in the second part the Nostrils, and in third part the Mouth.

Note, that the Eyes must be distant one from the other the length of one of the Eyes, and that their inner corners be perfectly over the out-side of the Nostrils.

S E C T.

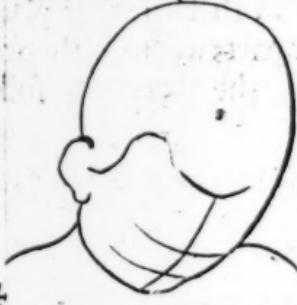
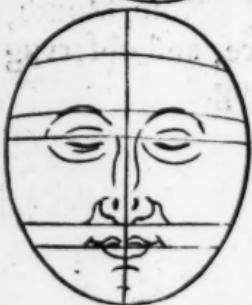
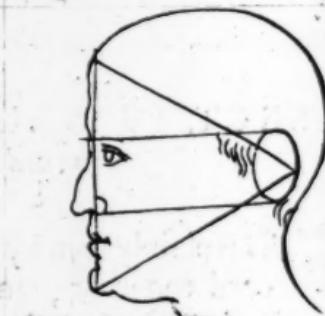
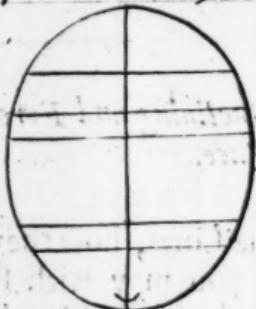
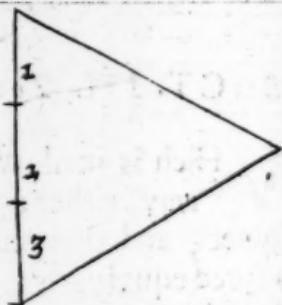
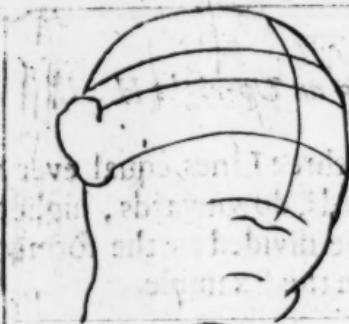
SECT. III. *To draw an Up-right Head.*

**W**HICH is made with three Lines equal every way, either upwards, downwards, higher or lower; and that must be divided as the former into three equal parts, as in the Example.

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SECT. IV. *Of the Inclining and Fore-shortned Face.*

**T**HIS is plainly seen by the Lines, how they concord together, and you may with facility draw in their proper places the Nose, Mouth, and other parts with a little practice, and observing diligently the Examples following.



In these Formes you must be very perfect, it being a Rule that in most Faces you may have occasion to make use of: for of all the parts of Mans bodie the Face is the most difficult. But having got the Proportions with their Measures, you will be able (which way soever a Face turns) to form it out, whatever proportion your Face is you are to imitate, so must your Out-stroke be formed; whether long, round, fat, or lean.

Because presidents are most usefull, I have here thought good to give you the forms of several Eyes more at large, by which you may with more ease know the truth of their Proportions.

As also Ears, which are exactly to be known; and then the forms of several Noses and Mouthes; all which are taken from eminent Masters, as *Palma* and others. [In the following Page.]

**SECT.**



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**SECT V. Of the Nose, Mouth, and Chin.**

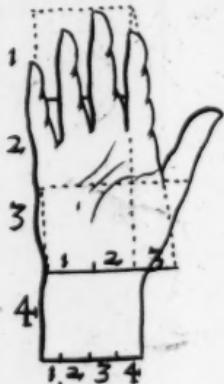
**T**He Nose is the most eminent part of the Face ; in which observe the hollowness , roundness, and the Nostrils, as they appear in these several Figures borrowed from *Fiolet*.

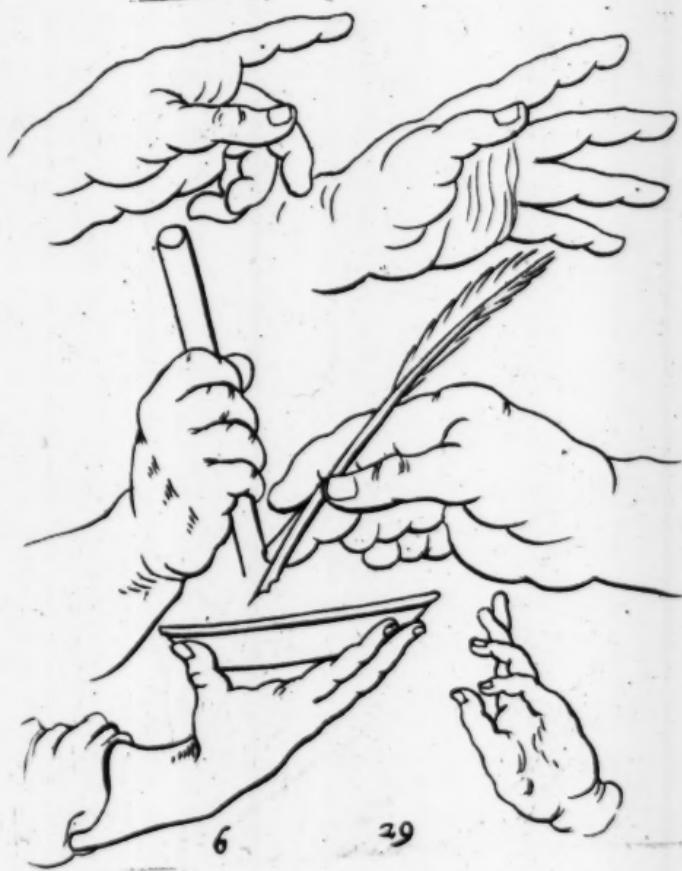
1. Describe a Semi-circle downwards.
2. Make the Holes of the Nose.
3. The addition of the Nostrils.



**SECT. V.** Of Hands, both Palm, Back, and Sides; as also open and closed: and likewise of Hands and Armes joyned.

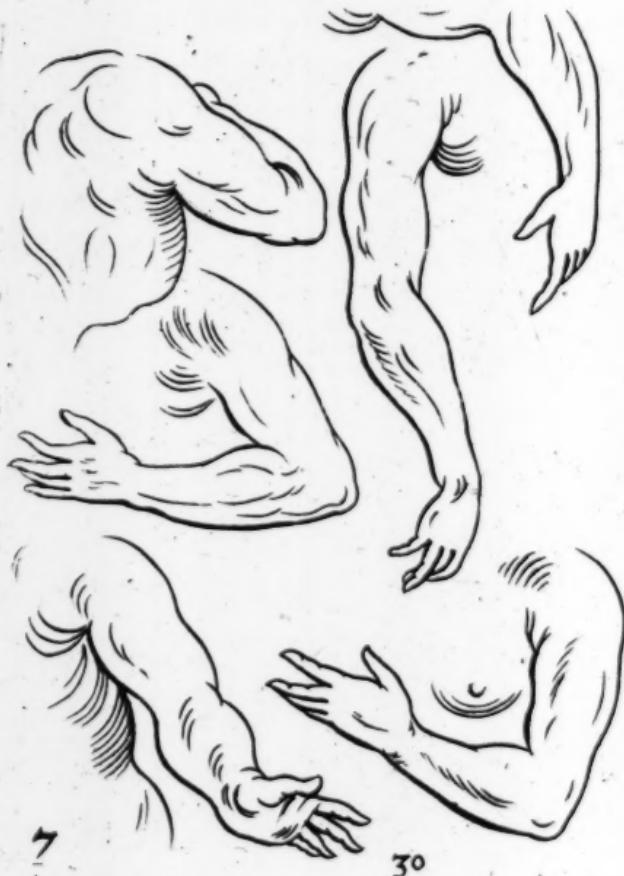
**H**aving sufficiently practised the Drawing of Mouthes and Noses, let your next exercise be in drawing of Hands in all positions, both by measures, and without; as also Hands and Armes joyned.





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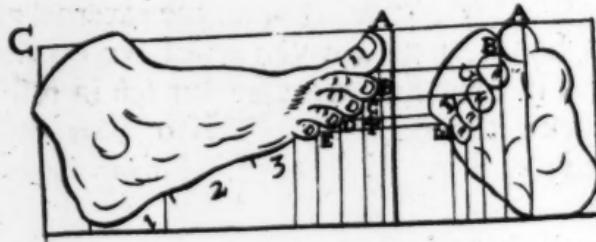
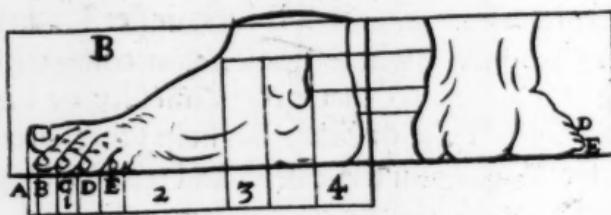


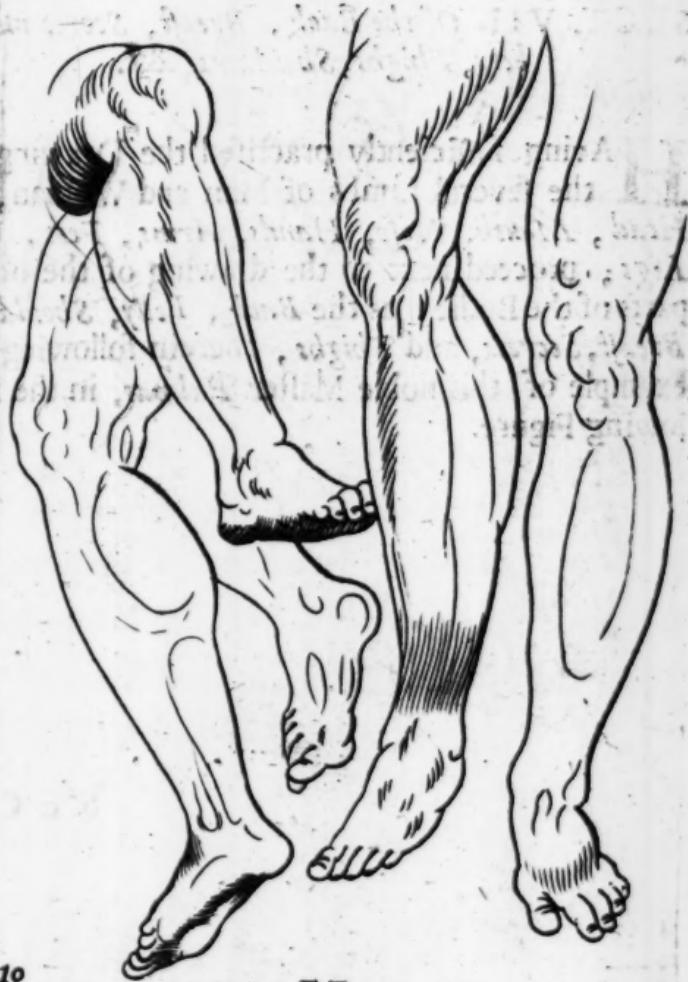
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SECT. VI. Of Feet in several positions, both with and without measures, as also of Feet and Legs joyned together.

Being expert in the Drawing of *Hands* and *Arms*, proceed to the Drawing of *Feet* in all postures, both with and without measures; which having attained, exercise your self in Drawing of *Legs* and *Feet* joyned together, as before you did of *Hands* and *Arms*; that so you understanding the particulars of the whole Bodie, you come with the more judgement to that great difficulty of Figures of the whole Bodie of Man. To help you therein, I have set before you the easiest and truest Rules that the best Masters of Proportions have published, with a Discourse of their true Measures: which will be the more easie, if you seriously weigh the foregoing Chapter, treating of all the external parts of Mans bodie, for then you will have occasion to observe it; but first exercise your self in following these examples of *Feet*, as also of *Feet* and *Legs* joyned together. [See the 2. following Pages.]





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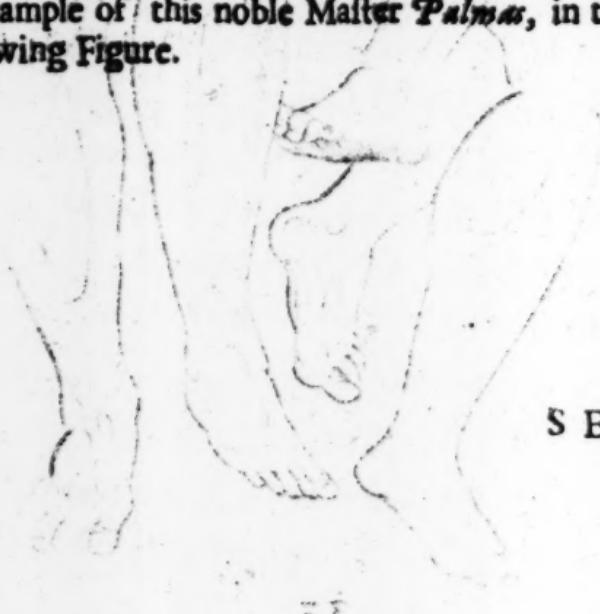
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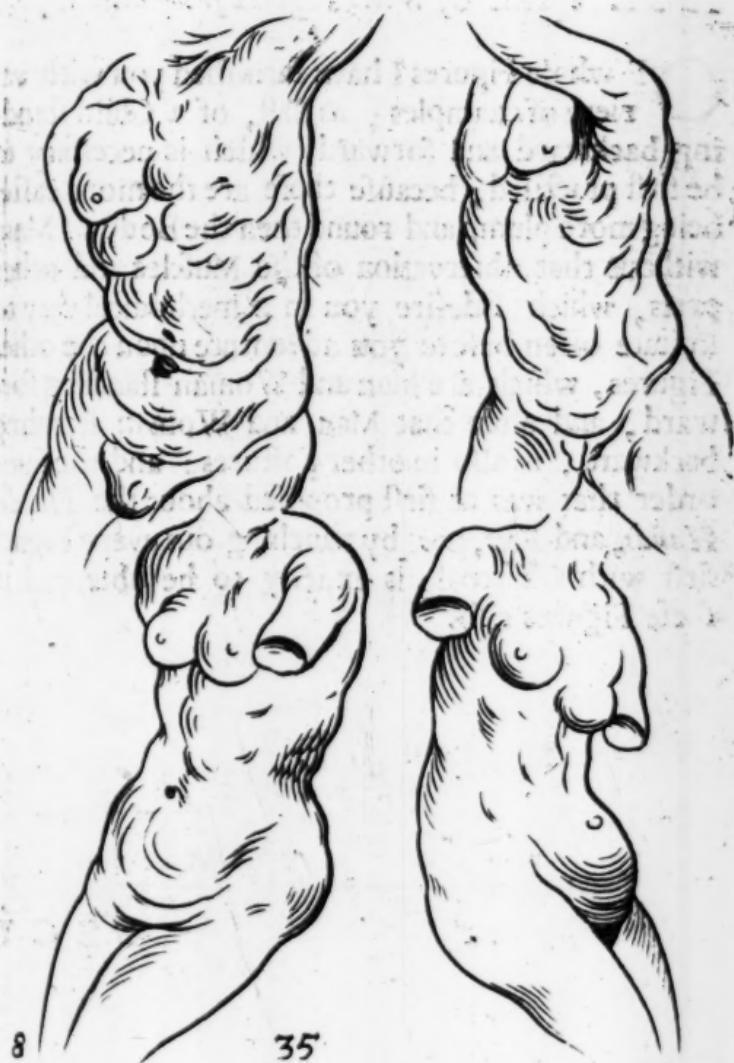
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**SECT. VII.** *Of the Back, Breast, Secret members, Thighs, Shoulders, &c.*

**H**aving sufficiently practised the Drawing of the several Limbs of Man and Woman, as *Head, Mouth, Nose, Hands, Arms, Feet, and Legs*; proceed next to the drawing of the other parts of the Bodie: as the *Back, Belly, Shoulders, Breast, Secrets, and Thighs*, therein following the example of this noble Master **Palmar**, in the following Figure.



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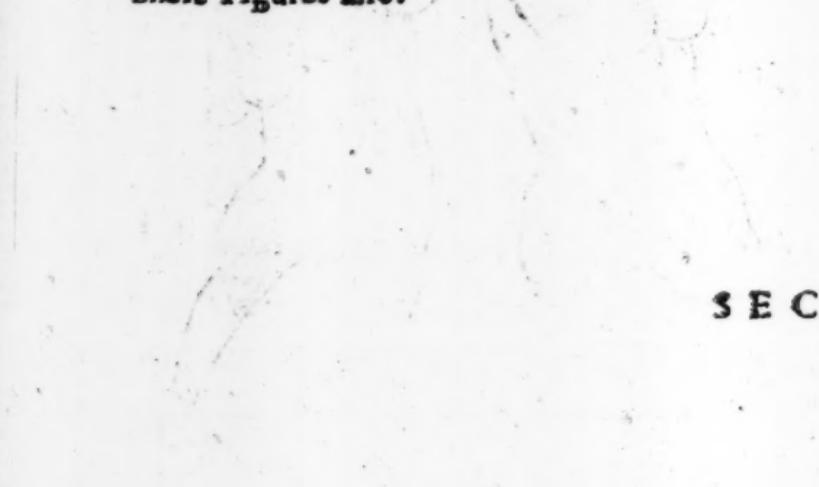
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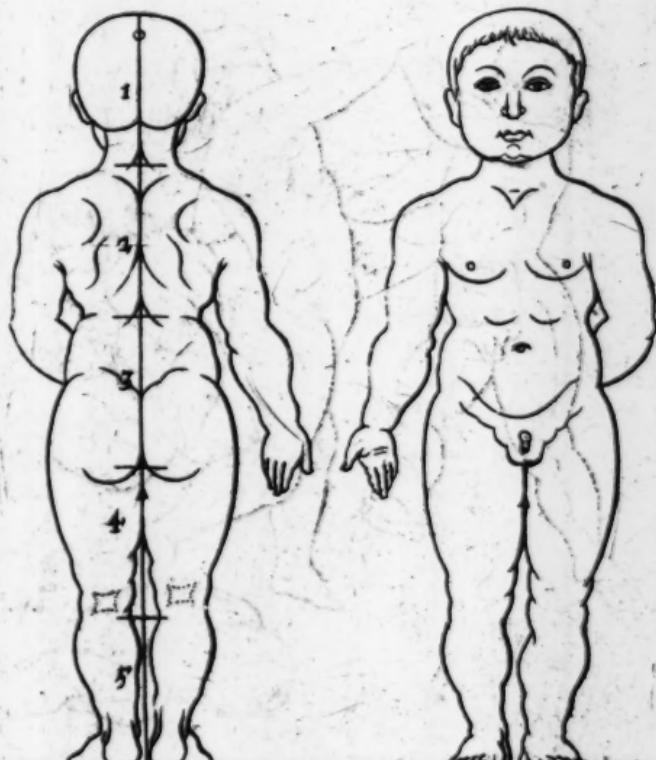
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**SECT. VIII.** *Of whole Figures from head to foot.*

OF whole Figures I have furnished you with variety of examples ; as first, of a Child standing backward and forward, which is necessary to be first practised, because these are the more easie, being more plump and round then the Body of Man, without that observation of the Muscles and other parts, which I desire you in a methodical way to imitate often before you adventure upon the other Figures, which are Man and Woman standing forward, and after that Man and Woman standing backward, as also in other postures : and the same order that was at first proposed about the *Heads, Hands, and Feet, &c.* by touching out every Figure first with Charcoal, is exactly to be observed in these Figures also.



S E C T.



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SECT.

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*The Excellency of*

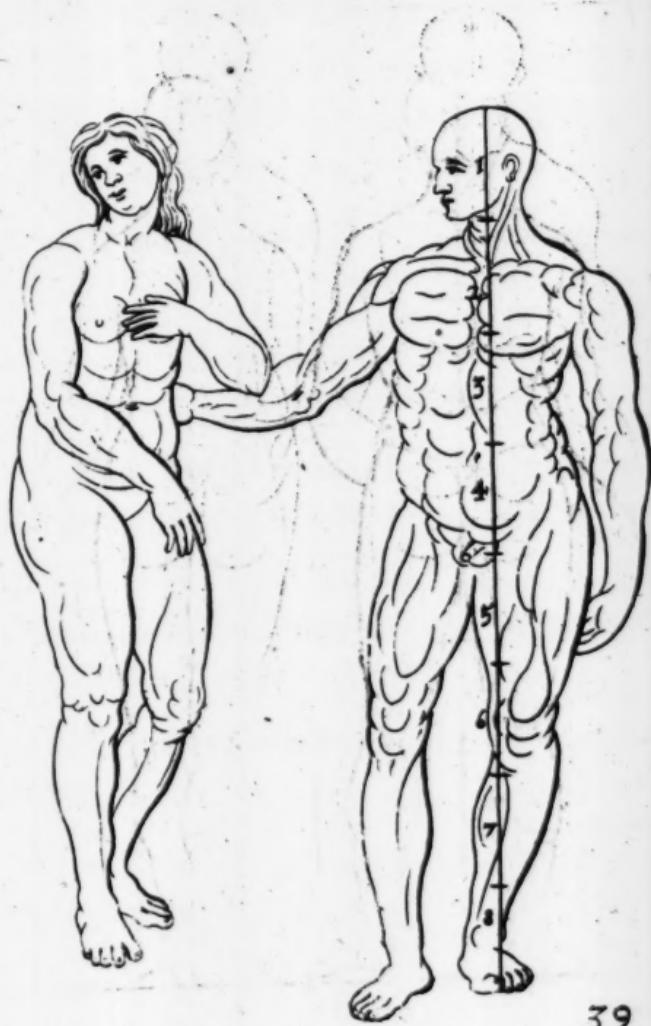


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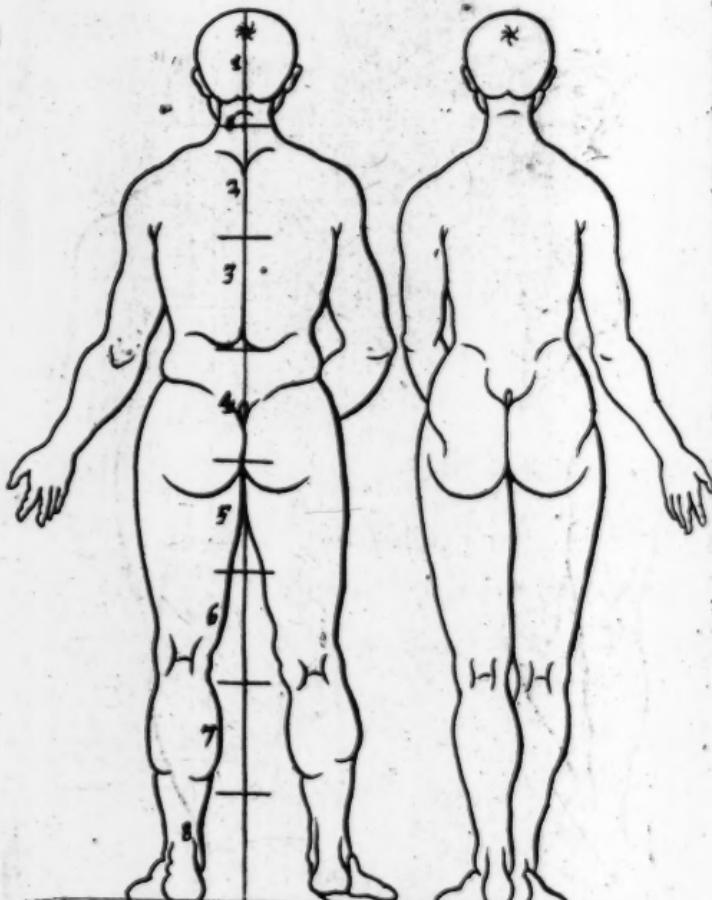
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SECT. IX. *Rules of Symmetrie or Proportion to be observed in Drawing the Whole Body of Man or Woman.*

FOR your further help in Drawing the following Figures, take notice of these necessary Rules: Begin at the *Head*, and so proceed by degree, as your pattern directs; and be carefull that your parallel *Joynts*, *Sinews*, or *Muscles* be directly opposite; also that the Motion of the Bodie be answerable one part to another, and that the parts and limbs of the bodie have a due symmetrie; not a great *Arme*, and a small *Leg*; or a small *Hand*, and a great *Finger*, &c. Let not one part be too long for another. Of all which, you must know, that at first you will be apt to commit many errors, but be not disheartned; proceed, and your labour will not be lost, experience is gained by practice; be but diligent, and you will find more ease then you could imagine: at first all things that are attainable seem difficult; we have a good old saying, *Nothing is hard to a willing mind*, and I can speak it by experience. I might spend time to tell you many stories how to proceed to Figures clothed, &c. but if you can draw a Naked figure well, for the order of Garments, you will be able to do that with ease.

And









And now, having brought you thus far in Practice, and given you a more exact order to proceed with so many several Examples more than larger Volumes have produced; which you having well followed, and attained to some reasonable measure of Proportion, you may now proceed to that which may be more profitable, if you first practice those things that may be easily shadowed with a Pen, and that will fit your hand for Etching with *Aqua fortis*, which shall be perfectly taught in the next Chapter; wherein you have the mixture of the Ground to Etch upon, the order how to prepare your Copper, and how to order your *Aqua fortis*, what Instruments you are to use about the same, and how to take off your design on the Plate; which is an experimental Rule practised by the best Etcher in *England*, namely Mr. *W. Hollar*.

### *SECT. X. The Proportion of the Body of Man.*

**F**OR your further information, and to direct your judgement in Drawing of whole Bodies, observe these following Proportions.

A Man standing, from the top of the Head to the bottom of the Feet, is eight times the length of the Head.

The Arme hanging straight down, it reacheth within a span of the Knee.

A Hand must be the length of the Face, the Hand spread abroad must cover the Face, and no more.

Note, that in Drawing a Figure standing, you must

must first draw that Leg which the Body stands firmest upon; otherwise your Figure will yield one way or other, as it were falling.

A Mans Armes extended is the just length of the whole Body.

The like proportion is observed for Women, and therefore one example serves for both.

The Proportion of a Child, according to our learned Author *Lomantius*, consists of five lengths of the Head; according to the Figure express'd in our Discourse, for an example to the Practitioner.

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## C H A P. VI.

### *of Shadowing, and Rules to be observed therein.*

**T**H E out-lines of any Draught or Picture give the Symmetrie or Proportion, which is enough to a good judgement: So the Figures before in this Book have only the out-lines, and those are best to practise first by: I say, the Out-lines shew the Proportion to a good judgement; but the Lines and Shadows give the lively likeness. In Shadowing therefore of any Picture you must observe these Rules following.

#### *R U L E I.*

Cast your Shadows always one way, that is, on which side you begin to shadow your Figure, either on the right or left side, you must continue so doing through your whole work. As in the figure of a Man, if you begin to shadow his left Cheek,

Cheek, you must shadow the left side of his Neck, the left side of his Armes, the left side of his Bodie, the left side of his Legs, &c. Except the light side of the Figure be darkned by the opposition of some other body standing between the light and it. As if three Men were standing together, that Figure which stands in the middle must be darkned by the foremost, except the light come between them.

*R U L E I I.*

All Shadows must grow fainter and fainter, as they are farther removed from the opacous body from whence they issue.

*R U L E I I I.*

In great Windes, where Clouds are driven to and fro several wayes; as also in Tempest at Sea, where Wave opposeth Wave; here contrary shadows must concur, as striving for superiority: here in such cases you must be sure to supply the greatest first, and from them, according to your judgement, supply the lesser; practice and imitation of good Copies will be your best director.

*R U L E I V.*

All Circular bodies must have a Circular shadow, as they have a Circular form, and as the object of light which causeth shadow is Circular.

C H A P. VII.

*of Drapery, and Rules to be observed therein.*

**A**S in Naked figures you draw the Out-lines first, the like you must do in *Drapery*, leaving room within for your greater and lesser folds; then draw first your greater folds, and then break your greater folds into lesser contained within them: the closer the Garment fits to the bodie, the smaller and narrower must the folds be. Shadow your folds according to the directions of the last Chapter; the innermost harder, and the outer more softer. As in *Shadowing*, so in *Drapery*, good copies of Prints instruct best; yet take these general Rules following.

*R U L E I.*

Continue your great folds throughout your Garment, and break off your shorter at pleasure.

*R U L E II.*

The finer your *Drapery* is, the fuller and sharper must your folds be, and the shadows the stronger, but yet sweet.

*R U L E III.*

That part of any Garment that fits close to the body, as the Doublet of a Man, the Breasts of a Woman, and the like, you must not fold at all; but rather with your sweet shadow represent the part of the bodie that lies under the Garment, as a Womans Breast, with a sweet round shadow, &c.

## C H A P. VIII.

*of Landskip, and Rules to be observed therein,*

**L**andskip is that which expresseth in Picture whatsoever may be beheld upon the Earth, within the *Species* of Sight; which is the termination of a fair Horizon, representing Towns, Villages, Castles, Promontaries, Mountains, Rocks, Vallies, Ruines, Rivers, and whatsoever else the eye is capable of beholding within the *Species* of the Sight. To express which, and to make all things appear in Draught or Picture according to true proportion and distance, there are several Rules to be observed, of which take these few following.

*R U L E I.*

In every *Landskip* shew a fair Horizon, the Sky either clear or overcast with Clouds, expressing the rising or setting of the Sun to issue (as it were) from or over some Hill, or Mountain, or Rock; the Moon or Stars are never to be expressed in a fair Landskip, but in a Night-piece, I have often seen it, as in a piece of our *Sarimus* being taken by night, and in others. As an Astronomer with his Quadrant taking the height of the Moon, and another with his Cross staff taking the distance of certain Stars, their Man standing at a distance with his Dark-lanthorn, to see their Degrees when they had made their observation; these things, as taking of the Partridge with the Loo-bell, and the like, become Night pieces very well.

*R U L E*

*R U L E II.*

If you exprest the Light of the Sun in any Landskip, be sure that through your whole work you cast the light of your Trees, Buildings, Rocks, Ruines, and all things else expressed within the verge thereof thitherwards.

*R U L E III.*

Be sure in Landskip that you lessen your bodies proportionably according to their distances, so that the farther the Landskip goeth from your eye, the fainter you must express any thing seen at distance, till at last the Sky and the Earth seem to meet, as the Colours in a Rainbow do.

There are many excellent pieces of Landskip to be procured very easily; as also of Landskip and Perspective intermixed, which pieces to me were ever the most delightfull of any other; and such I would advise you to practise by; they, if they be good, being the only helps to teach you proportion of Bodies in any position, either near or a-far off.

I might here speak further of *Damasking*, *An-tique*, *Frisco*, *Grotesco*, *Tracery*, and the like; but these are things that when you are expert in good Draught, as (by diligent practice and following the Rules and Examples before delivered,) I hope (by this time) you are, these things will come of themselves, and indeed, no sooner heard of or seen, but done. And thus I conclude this first book of Drawing with the Pen and Pastils, and shall now proceed to the second Book, which teacheth the Art of *Etching* and *Graving*



O F

## ETCHING and GRAVING.

The Second Book.

## C H A P. I.

*Of Etching with Aqua fortis.*

**T**HERE are several wayes for *Etching*, and several Grounds of divers colours, used by several men, I shall deliver here onely one, and that so familiar, easie, and true, that I believe there is not a better Ground, nor a more accurate way performing the work intended, than that which shall be here taught; it being the only way, so many years practised, and to this day continued by that unparallel'd designer and incomparable Etcher in *Aqua fortis*, Mr. *Hollar*; the manner of performing the whole work is as followeth.

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SECT. I. *To make Mr. Hollar's Ground, and how to Etch in Copper, and what Instruments ought to be used in the practice thereof.*

**T**AKE three parts of *Virgins wax*, one part of *Asphaltum*, one part of the best *Mastick*; if you

you will, you may take away a third part of the *Ashphaltum*, and put instead thereof as much refined *Rosin* that is transparent and clear, for this will be better to see through the Ground, to stop up what you have occasion for. Beat your *Ashphaltum* and *Rosin* together to powder, and put your *Wax* into a clean Pipkin that hath never been used before, and set it over a gentle fire, and let it boyl; then pour in the *Ashphaltum* and *Rosin* into it, and mingle them all together. Then take a Porenger or such like thing full of clean water, and pour that boylng stuff when all is melted into the water, but pour not out the dregs, then when it is cold work it up into a coal or ball; and when you are to use it, then take a clean rag and double it, that no dregs or knots may come through the rag, and tie it fast with a piece of thread; so is your Ground prepared.

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**S E C T. II.** *How to prepare your Copper.*

**Y**Our Copper must be well planisht, that it may lie level; and before you lay on the Ground, take your Plate, and with a Charcoal well burnt coal it over with very clean water; then wash it off with clean water never used before, and set it sloping to run off; when it is dry, then scrape some Chalk fine all over it, and with a very clean fine rag rub it over; but let not your fingers touch upon the Plate, till you have put the Ground on, which you must lay on thus.

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**SECT. III.** *How to lay the Ground upon the Plate.*

Put into some fire-pati some small-coal or coal-fire, for charcoal is too hot, then lay down the Copper over that, so as the fire may have air; then take your Ground, it being in a cloth as aforesaid, and rub up and down the Copper, so as it sufficiently may cover the Plate, not too thin nor too thick; then take a Ducks feather of the wing and smooth it as well as possibly you can all one way, and then cross and cross until it lie well to your eye; but take heed that your Copper be not too hot, for if it lie until the Ground smoak all the moisture of the Ground is burnt away, and that will spoil your piece in Etching, because the Ground will break or fly up; this done, let your Plate be cold, then grind some White-lead with Gum-water, and note, that as much Gum as the bigness of a Cherrry-stone will serve for a piece of White-lead as big as a Nutmeg; but you must understand, that you must put so much water that the white may be of convenient thickness to spread on the Copper.

Then you must have a large Pencil or small Brush, as the Painters use, of the bigness of a Walnut, or more especially for a large Plate, and with that strike over the Plate cross twice or thrice, till you see it smooth.

Then you must have another Brush larger then the first, but very smooth, made of several Squirrels tails, with that you may smooth gently the White, which

which you could not do with the other Brush , and then let it lie till it be dry.

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**SECT. IV.** *How to transfer your design upon the Copper.*

**T**hen take your design or Copie after which you are to work, scrape on the back-side thereof some red Chalk all over, then go over that by scraping some soft small coal till it mingle with the chalk, then take a Hand-brush or great Pencil that is very stiff, and rub it up and down till it be fine and even, and so lay down the design on your Plate, and with a blunt Needle or Point draw over the out-stroke ; you must have several Needles , some bigger, and some finer, put them into a pencil-stick of the length of a writing-pen , and on the other end keep one Pencil to wipe away the Ground that your Needle fetches off when you work. To blunt your Needle point you must do thus, blunt it on a Table, or on the back-side of a Copper-plate, still holding the point downward , and carry your hand circular that you keep the point round ; the finest Needles you must sharpen upon a fine Whet-stone , and still turning it betwixt your fingers as you whet it, as the Turners do their work, to keep it round , then after smooth it upon a Table-book leaf; and as you work you need not scratch hard into the Copper, only so as you may see the Needle go through the Ground to the Copper , and alwayes when you leave your work wrap your Plate up in paper , lest

your Plate get scratches, which it will be apt to do, and the Ground will be apt to be corrupted lying open in the air, and the moisture drawn out of the Ground, and the same inconveniency will accrue by letting your Ground lie too long upon your Plate before you finish, three or four moneths time will eat out the moisture of the Ground, and in Etching it will seem broad and deep, and when you think it eaten enough, you will find it to be eaten little or nothing: in Winter time wrap your Plate in a Blanket as well as Paper when you leave your work; if the Copper get frost, it will cause the Ground to rise up from the Copper in the eating with the *Aqua fortis*.

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**S E C T. V.** *How to wall about your Plate about with Wax, to lay on your Aqua fortis, and to finish your Work.*

**Y**Our Plate being prepared, your Ground laid on, and your Design transferred upon your Plate; when you are going to Etch, then take green Wax and melt it in some little pipkin, and with a Pencil cover round about the edges of the Copper; first, with the hot Wax stick it round about the Plate as a wall to keep in the *Aqua fortis*, that it may stick fast, let the same be of Green wax also, which draw out into long pieces of the thickness of strong paste-board, and as broad as a knife, then fasten it about the edges with a little stick being broad on the end, and sharp edged, and with it thrust

thrust down the Wax to make it stick , then if your work be fine, take of *Aqua fortis* the third part of an ounce , and break it with your other water that hath been used before twice or thrice, and take at least two parts of the old to one part of the new. In case you have no *Aqua fortis* formerly used, take good Wine-vinegar to mix with your *Aqua fortis*, but if your work be coarse, you may use your three pence the ounce Water only ; and for such things as you will have fine and sweet, you must first pour out your *Aqua fortis* into some earthen dish , then wash off the *Aqua fortis* with clean water, and let it be dry, then melt some Candle-grease with a little Ground, and with a Pencil cover those things you will have to lie faint, then pour on your *Aqua fortis* again as oft as you see need ; then melt your Ground the same way you laid it on , and with a linnen rag wipe clean your Plate, and so is your work finished.

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## C H A P. II.

### *Of G R A V I N G.*

SECT. I. *Of necessary Instruments belonging to Graving.*

**H**E that will undertake the Art of Graving, must know how to Draw, and hatch with a Pen ; which, I doubt not, but he that hath observed the former Rules can do.

i. *Of*

*I. Of your Oyl-stone.*

The first thing you are to do, is to provide a good Oyl-stone , which you may have of those that sell several Tooles for the *Goldsmiths*; which, let be very smooth, not too hard nor too soft, and be sure it be without pin-holes. Now to fit your self aright, you are to resolve what kind of Graving you will follow ; if you follow Picture or Letter-work, that is a work more curious than the *Goldsmiths*: Armes and Letters are upon Silver or Pewter , and accordingly your Gravers must be shap'd.

*2. Of Gravers.*

*Goldsmiths* Gravers are crooked, that they may more readily come at hollow work, but for Copper-pictures or Letters the best Gravers are the straight, which chuse thus ; Take a File and touch the edge of the Graver therewith , if the File cut it, it is too soft and will never do you good ; but if the File will not touch it by reason of the hardness, it will serve your occasion, although such a Graver be apt at first to break short off, after a little use by whetting it will come to a good temper and condition, as by experience I have found ; though some ignorant of what they have writ , would puzzle you about altering the temper.

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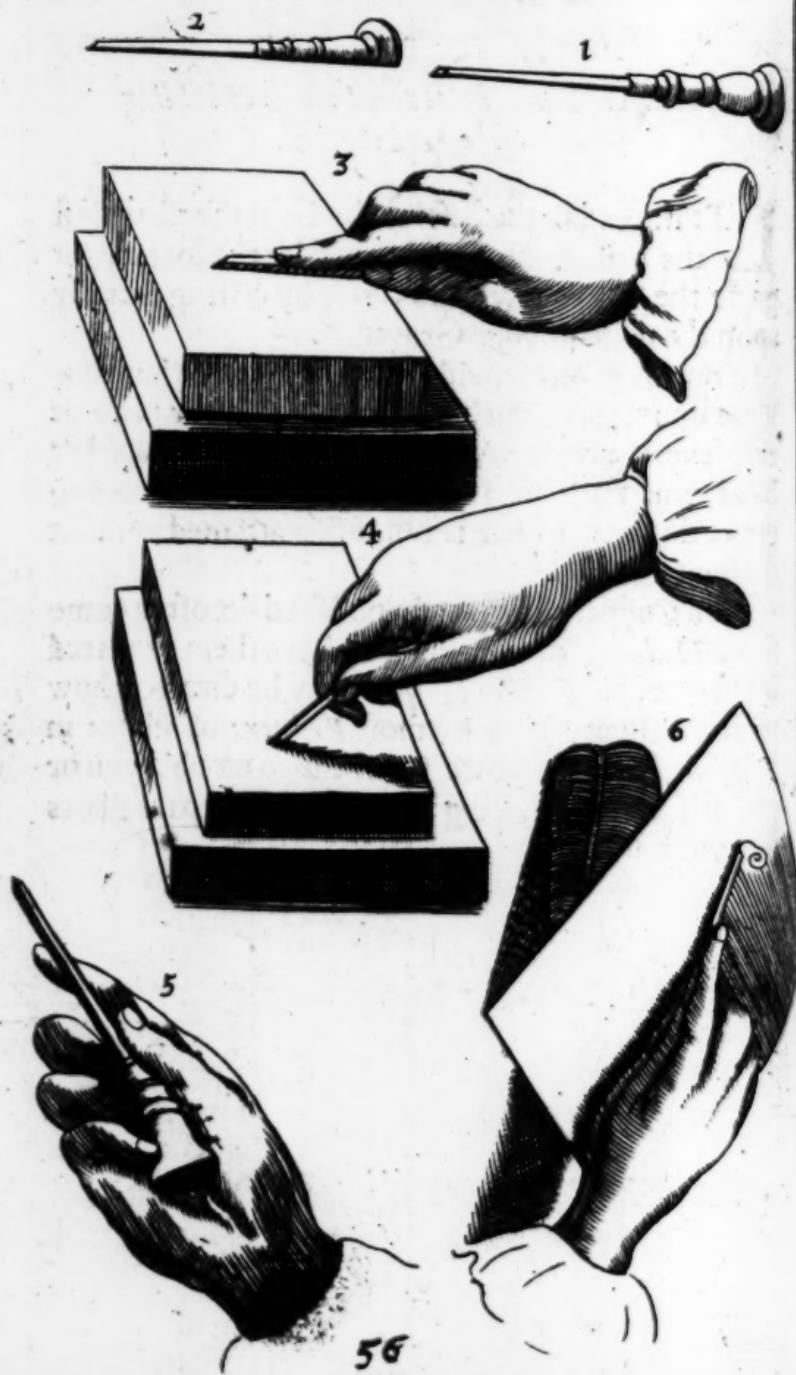
SECT. II. *The several wayes of holding  
the Graver.*

Let the end of the haft of the Graver rest against the ball of the thumb, and let the fore-finger guide the Graver, which is done by resting steadily upon the point of your Graver.

You must also provide a Bag of Sand to lay your Plate upon, on which you may turn your Plate at ease every way: And note, that with your left hand you must turn your Plate as the stroaks you grave do turn, which is not easily attained without diligent care.

You Copper plates ready polished do often come from *Holland*, or else you may have them prepared by several in *England*; you may be directed how to have these Plates by most *Printers* of Plates in *London*, and therefore I forbear to trouble you or my self about directing you how to prepare Plates for your use.

S E C T.



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**SECT. III. *The forms of Graving-tools, as also  
the manner of Whetting your Graver.***

The upper part of this figure will shew two sorts of Graving-tools, the one formed square, the other lozeng : the square Graver makes a broad and shallow stroke, or hatch ; and the lozeng makes a deep and narrower stroke. The use of the square Graver is to make the largest strokes, and the use of the other is to make the strokes more delicate and lively. But I preferre a Graver made of an indifferent size betwixt both these two , which will make your strokes, or hatches, show with more life and vigour , and yet with sufficient force, according as you shall manage it in your working : The forms of which will appear in the 1. and 2. figures.

The 3. figure shews you how to whet the two sides of your Graver, which is to be done in this manner following ; you must have a very good Oyl-stone smooth and flat , and having powred a little Sallad-oyl thereupon, take the Graver , and laying one side of it (that which you intend shall cut the Copper) flat upon the stone, whet that side very flat and even ; and to that purpose have an especial care to carry your hand stedfast , and with an equal strength, placing your fore-finger very firm upon the opposite side of your Graver , to the end that you may guide it with the more exactness: then turn the very next side of your Graver , and whet that in the like manner, as you did the other ; so that

that there may be a very sharp edge for the space of an inch or better; then turning uppermost that edge which you have so whetted, and setting the end of your Graver obliquely upon the stone, carry your hand exactly even, to the end that it may be whetted very flat and sloping, in the form of a lozeng, making to the edge a sharp point, as the figure 4. shews you.

It is very necessary that you take great care in the exact whetting of your Graver; for it is impossible that you should ever work with that neatness and curiosity as you desire, if your Graver be not very good, and rightly whetted.

I cannot demonstrate it so plain and fully by figures, and discourse, as I would: if you have acquaintance with an Artist in this way, you may easily understand in a short time.

#### **SECT. IV.** *The manner how to hold and handle your Graver.*

**T**He uppermost part of this figure describes to you the form of two Gravers, with their handles, fitted for the whetting. They that use this Art, do before they make use of them, commonly cut away that part of the knob or bowl that is at the end of their handles, which is upon the same line with the edge of their Graver, to the end it may not hinder them in their graving, as the figure 2. shews you.

Fot if you work upon a large Plate you will find  
that

that part of your handle (if it be not cut away) will so rest upon the copper, that it will hinder the smooth and even carriage of your hand in making your strokes or hatches; also it will cause your Graver to run into the copper in such sort, that you shall not be able to manage it at your pleasure.

The 5. figure describes to you the way of holding your Graver; which is thus, place the knob or ball of the handle of your Graver in the hollow of your hand, and having extended your fore-finger towards the point of your Graver, laying it opposite to the edge that should cut the copper, place your other fingers on the side of your handle, and your thumb on the other side of the Graver, in such sort that you may guide your Graver flat and parallel with the plate; as you may see in the figure.

And be very carefull that your fingers do not interpose between the plate and the Graver, for that will hinder you in carrying your Graver level with the plate, so that you cannot make your strokes with that freedom and neatness, which otherwise you may. This I think fit to give you notice of, because the skill of holding your Graver is that which you must first perfectly learn.

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S E C T. V. *The manner of holding your hand  
in Graving.*

Having described the way of holding your Graver, the next thing is to shew you how to guide your Graver upon the plate in making of your strokes,

strokes, which are straight or crooked ; that you may work with the more ease and convenience, you must have a strong round leather cushion fill'd with sand or fine dust ; let it be made about half a foot broad in the diameter, and three or four inches deep; lay this upon a table which standeth fast and firm : then lay your plate upon the cushion, as is described in the 6. figure.

When you are to make any straight strokes, hold your Graver as is directed in the former Section, and if you will have your strokes deeper or broader in one place than in another , in that place where you would have them deepest you must press your hand hardest ; but especially in making of a straight stroke, be carefull to hold your plate firm and stedfast upon the cushion.

And if you make any crooked or winding strokes, then hold your hand and Graver stedfast ; and as you work turn your plate against your Graver ; for otherwise it is impossible for you to make any crooked or winding stroke with that neatness and command, which by this means you may, if you do not move your plate, and keep your arm and elbow fixed or rested upon the table.

If as you are working your Graver happen to break often on the point , it is a sign it is tempered too hard ; to help this take a red hot charcoal , and lay the end of your Graver upon it , and when you perceive your Graver to wax yellowish, dip it in the water : If your Graver become blunt without breaking, it is a sign it is nothing worth.

After you have graved part of your work, it will  
be

be necessary to scrape it with the sharp edge of a Burnisher, carrying it along even with the plate, to take off the roughness of the strokes; but in so doing take heed of making any scratches in your work.

To the end you may better see that which is graven, they commonly roll up close a piece of a black Felt or Castor, liquored over with a little Oyl, and therewith rub the places graven: And if you perceive any scratches in your plate, rub them out with your Burnisher: and if you have graved any of your strokes too deep, you make them appear fainter with rubbing them with your Burnisher.

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SECT. VI. *How to take off any Picture, or Map-letters, &c. upon your Copper.*

TAKE your Plate and heat it over the fire, and having a piece of yellow Bees wax, put into, and tyed up in a fine Holland rag, try if your Plate be hot enough to melt your Wax, if it be, lightly wipe over your plate with that wax, until you see it be covered over with wax, but let it be but thin; if it be not even, after it is cold you may heat it again, and with a feather lay it even, which at first you will find a little difficult.

Now if what you are to imitate be an exact copy, you must note it must stand the contrary way in the plate, and therefore your best way will be to track it over in every limb with a good Black-lead Pencil, especially if it be an old picture, which having done, take an old Ivory haft of a knife, and placing your

E picture

picture exactly on your copper, the face downward, take your haft and lightly rub over your print, and you shall perceive the perfect proportion remain upon the wax that is upon the plate; then take a long Graver, or another piece of steel grownd sharp, and with the point thereof go over every particular limb in the out-stroke, and there will be no difficulty to mark out all the shadows as you go to engrave your work, having the proportion before you.

And it will be more ready, if also you note your shadows how far they be dark, and how far light with your Black-lead, before you rub it off; but a learner may be puzzled at first with too many observations.

At first you will find some difficulty for carrying your hand, and for the depth of your stroke you are to engrave; but take this experiment in your first beginning; learn to carry your hand with such a slight, that you may end your stroke with as light a stroke as you began it, and though you may have occasion to have one part deeper or blacker than another, do that by degrees; and that you may the more distinctly do it, observe your strokes that they be not too close nor too wide: and for your more exact observation, practice by those prints that are more loosely shadowed at first, lest by imitating those dark and more shadowed, you be at a loss where to begin or where to end; which to know, is only got by practice: Thus for Pictures.

Now for Letters, if copies, every word and letter must be either writ with ungumm'd Ink, or else gone over with Black-lead, and rubb'd on the  
plate

plate when it is waxed, as before; but if a Map or other Mathematical Instrument, every circle, square, or perpendicular must be drawn over as before, or else you cannot exactly imitate the same; but if you be to cut any Face, Armes, Instruments, or Map not to be printed, then if you black over the back-side, as you are directed for your design in Etching, that will serve your turn; onely for Etching you use a mixt ground, and for to Engrave you onely use wax.

And thus, in a plain style, I have given you an account of the whole mysterie of *Engraving*.



O F  
L I M N I N G  
I N  
W A T E R - C O L O U R S.

*The Third Book.*

**T**H E practice of *Limning* is a quality commendable in any person, and a practice meet for the Nobleſt perſonage of what quality ſoever; I ſhall ſay no more in the praise of it, it may ſpeak for it ſelf, but come immediately to ſhew you the manner how to perform it; therein following the Rules now practiſed by the moſt eminent Maſters in that faculty: and firſt, I ſhall begin in this as in the other parts of this Book, what things are to be in a readineſs prepared for the practice of it.

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C H A P. I.

*of necessaries belonging to Limning.*

**T**O the Limning in Water-colours there belongs ſeveral thing, as *Gumms* of ſeveral ſorts, and *Waters* made of them, a *Grinding-stone* and

and *Muller*, several *Colours*, *Liquid Gold* and *Silver*, several *Sizes* to lay *Gold*, *Parchment* of the finest, as of *Abortive Skins*, *Pencils* of divers sorts; of the making and preparing all these in their order, and then to their use.

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**S E C T. I. Of Gumms and Gum-Waters used  
in Limning.**

**T**He principal Gum is *Gum-Arabick*, get the best that may be, which you shall know by the *whiteness* and *clearness*; if it be yellowish, of an *Amber* colour, it is naught.

To make *Gum-water* hereof, do thus, take a clean earthen Vessel, Pan, Dish, or the like, put therein the fairest Spring-water you can procure, then take a quantity of *Gum-Arabick*, and tie it in a fine clean Linnen cloth, as in a bag, and hang this in the middle of the water, and there let it rest till the *Gum* be dissolved; if you find your water be not stiff enough of the *Gum*, put more *Gum* into your cloth, and let that dissolve as the other did; if it be too stiff, add more Water: of this *Gum-water* it is absolutely necessary you have alwayes by you two sorts, one strong, the other weak; and of these two, you may make a third at pleasure; preserve these in clean Glasses for your use.

***Of G U M - L A K E.***

*Gum-Lake* is a compounded *Gum* made of many ingredients, as of whites of *Eggs* beaten and strained,

of Honey, Gum of Ivy, strong Wort, these ingredients mingled together will at last run like an Oyl, which at last will congeal and be hard. Trouble not your self to make it, but buy it readie made ; chuse it as you do the Gum-Arabick, by the clearness , and then you need not fear it.

To make Water thereof, use it in all respects as you did your Gum-Arabick, by tying it in a cloth and dissolving it in fair water ; of this water also have of two sorts , a weaker and a stronger.

#### *Of G U M - A R M O N I A C K .*

Of this Gum you may make a Water, that whatsoever you write therewith you may lay in Gold.

The manner of making the Water is thus ; take your Gum and grind it with the juice of Garlick as fine as may be, thereunto add a few drops of weak water of Gum-Arabick, making it of such a thickness as you may conveniently write with it with a pen.

With this liquor write what you will, and let it drie, but not too long, for if you do, the Gold will not stick, and if you lay on your Gold too soon, it will drown it. When you would lay your Gold upon it being drie, do thus, get a Gold-cushion, which you may thus make ; take a piece of Calves-leather rough, and get a board about sixinches long, and five inches broad , upon this board lay some woollen cloth four or five times double, and over all your Leather with the rough side outwards , nailing the edges of the leather to the sides of the board ; so is your Cushion made.

Upon this Cushion lay your Gold-leaf, and with a knife

a knife that hath a very sharp edge, cut your Gold upon your Cushion into pieces, so that it may quite cover what you have written, then breathe upon your writing, and with a piece of white Cotton-wool (breathing upon that also) lay it upon your Gold and it will take it off from your Cushion, which press down hard upon your Writing, and it will there stick; then with other Cotton-wool dry, wipe away the loose Gold, and your Writing only will remain, which when it is through drie you may burnish with a Tooth, and it will shew fair.

*Of LIQUID GOLD or SILVER.*

You may with *Liquid Gold* or *Silver* Draw or Write any thing with the Pen or Pencil, as with any other liquid colour; I could shew you how to make it, but to make a small quantitie it is not worth the while, neither will it quit the cost; therefore I would advise you to buy it readie prepared, which you may do where you buy your Colours, or of some *Gold-beaters*, who make it of their cuttings of the ragged edges of their Gold.

When you use it do only thus, put into your Shell a drop or two of fair water, and with a clean Pencil temper up so much Gold as will serve your occasion at that time, with which Write or Draw what you will; then about two or three hours after, the longer the better, burnish it by rubbing hard upon it with a Dogs-tooth, and it will be pure Gold; this is the best and easiest way of laying Gold that I know of.

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**SECT. II.** *Of your Grinding-stone and Muller,*

**G**et a Stone of *Porphyry* or *Serpentine*, or rather a Pebble, (if you light of one large enough) is best of any other. But in short, get as good an one as you can, which your *Marblers* in *London* may help you to; keep this and your Muller alwayes very clean and free from dust.

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**SECT. III.** *Of Colours.*

**T**here are simply six, viz. *White*, *Black*, *Red*, *Green*, *Yellow*, and *Blew*; to which we may add *Browns*, but they are compounded.

Of either of these there are several sorts, the names whereof, and the manner of ordering of them shall be shewed in the ensuing Chapter.

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**C H A P. II.***Of Colours used in Limning: their names,  
and how to order them.***SECT. I.** *Of the Names of Colours, and how every Colour is to be prepared; whether Grownd, Wash'd, or Steep'd.***BLACKS.**

*Cherry-stones burnt.*  
*Ivory burnt.*  
*Lamp-black.*

**WHITES.**

*Ceruse.*  
*White-Lead.*

**REDS.**

*Red-Lead.*  
*Lake.*

**GREENS.**

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GREENS.      BLEWS.      YELLOWS.

Bise.	Indico.	English Oker.
Pink.	Ultramarine.	Masticote.
Sap-green.	Bise.	BROWNS.
Cedar-green.	Smalt.	Umber.
		Spanish Brown.
		Colen's Earth.

These are the principal Colours used in Limning, I have omitted many others, but they are such that are not fitting for this Work, which I shall speak of when I come to teach how to *Wash* Maps and printed Pictures, for which use those Colours I have omitted are only usefull.

Of the Colours here mentioned, usefull in Limning, they are to be used three several wayes, viz. either *Washed*, *Grown*, or *Steeped*.

The Colours to be only *Washed* are these :

Bise.	Cedar.	Red-Lead.
Smalt.	Ultramarine.	Masticote.

To be *Steeped*, only Sap-green.

The Colours to be *Washed* and *Grown*, are these :

Ceruse.	Pink.	Spanish Brown.
White-Lead.	Indico.	Ivory,
Lake.	Umber.	& <span style="float: right;">} black.</span>
English Oker.	Colens Earth.	Cherry-stone

S E C T.

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**SECT. I I.** *Of those Colours that are to be Grownd,  
and how to Grind them.*

**I** Have in the last Section told you what Colours are to be Grownd, which Washed, and which to be Steeped ; it resteth now, to shew you how to Grind those Colours that are to be grownd ; I shall not run over every Colour particularly, but shew you how to grind one Colour, which take as an example for all the rest.

For our example in grinding of Colours, let us take the original of Colours, *viz.* Ceruse, or White-lead, there is little difference between them, only one is refined, the other not.

To grind it do thus ; Take a quantitie thereof, or of any other Colour to be grownd, being cleansed from all manner of dirt or filth, which you must first scrape off ; then lay the Colour upon your Stone, and with your Muller bruise it a little, then put thereto fair spring-water, and between your Muller and Stone grind the Colour well together with the water till the Colour be very fine, which when you find to be enough, have in a readiness a great Chalk-stone, in which make certain troughs or furrows, into which pour your Colour thus grownd, and there let it rest till it be thorough drie, then take it out and reserve it in papers, and those papers in boxes, for your use. This order you are to observe in all Colours that are to be Grownd.

S E C T.

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SECT. III. *Of those Colours that are to be Washed, and how to Wash them.*

**A**S in the Grinding of Colours I gave you an instance but in one for all the rest, the like I shall do for those Colours which are to be *Washed*; I will make my instance in *Red-lead*, which you are to Wash in this manner.

Put a quantity thereof into a clean earthen dish, and pour thereto fair water, stirring the colour and water together with your hand or otherwise, then let it stand a while, and you shall see a filthy greasie scum arise and lie above the water, with other filth; pour this water quite away, and put other clean water to the Colour, and stir it about again, pouring away the water (if foul) the second or third time; then add more water, and stir the Colour about again till the water be thick and troubled; but yet free from filth, then gently pour this troubled water into a second earthen dish, leaving in the first dish all the dregs.

Into the second bason put more fair water, and with your hand stir about the Colour as before; do thus two or three times, and take (if your Colour be very foul) a third earthen dish, and add more water, and keep stirring, till at last the water become clear, and the Colour remain fine at the bottom of the dish; pour away your water gently, and you will find some Colour remaining and sticking to the edges of the dish, which when it is dry, you may  
(with

(with a feather) strike away like flower, which reserve as the choicest and purest of all; it in a pound of this Red-lead you have an ounce of good indeed, prize it, for it is troublesome to procure. The other, which is not altogether so pure, may be serviceable for some uses, though not for all. What hath been said of this Colour is to be understood of all other that are to be washed; therefore for Washing of Colours let this suffice.

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#### *SECT. IV. Of Colours to be Steeped.*

I Said (among the Colours before mentioned) there was only *Sap green* to be Steeped, though in Colours to wash Maps and Prints there are many, but of these, when we come to shew how to Wash Maps, &c. To Steep your *Sap green* do thus, take a quantity thereof and put it into a Shell, and fill the shell with fair water, to which adde some fine powder of Allum to raise the colour; let it thus steep twenty four hours, and you will have a very good *Green*.

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#### *SECT. V. Of those Colours that are Washed and Ground, how to temper them in your shells. When you are to use them.*

You having all Colours both *Ground* and *Washed* by you in a readiness, when you begin any

any piece you must temper them as followeth, for which take one example for all.

Take any Colour, a small quantitie thereof, and put it into a clean shell, then add thereunto a drop or two of Gum-water, and with your finger (being clean) work it about the sides of the shell, and there let it stick till it be dry; when the colour is dry in the shell, draw your finger over it; if any Colour come off, you must add stronger Gum water to it. But, if when your Colour is dry in the shell, it glitter or shine, it is a sign there is too much Gum in it; therefore remedy that by tempering your Colour up again with fair water only, without any Gum.

There are some Colours, as *Lake*, *Umber*, and other hard Colours, which when they are dry in the shell will crack, and look like parched ground in a drie Summer; to such colours as these, when you temper them for use, add to them a small quantity of white Sugar-candy in fine powder, which temper with your Colour and fair water with your finger in the shell till the Candy be dissolved; and this will keep them from peeling when you have laid them on your work.

Note here, that these Colours following, viz. *Umber*, *panish-Brown*, *Colen-Earth*, *Cherry-stone* and *Ivory-black* are to be burnt before they be Wash'd or Grownd.

To burn any of them do thus, put the Colour into a Crucible, such as Gold-smiths melt their silver in; if you will, cover the mouth thereof with clay, and set it in a hot fire, there let it rest till it be red hot: when the Colour is cold you may Grind or Wash it according to former Directions. SECT.

**SECT. VI.** *Of Pencils, and how to choose them.*

**Y**OU are in the next place to furnish your self with *Pencils* of all sorts ; which how to choose do thus, take a Pencil and put the hairy end between your lips, wetting it a little by drawing it through your lips, being moist, two or three times ; so that the Pencil being large will come to a point as small as a hair, which if it do, it is good ; but if it spread, or any extravagant hairs stick out of the sides, they are naught ; you may try them by wetting in your mouth, and attempt to draw a line on the back of your hand.

**SECT. VII.** *Of Compounded Colours.*

**O**F the six simple Colours before named, together with the *Browns*, many others may be compounded for *Faces of all Complexions*, *Garmets*, *Landskips*, *Building* ; for *Birds*, *Fishes*, *Beasts*, and what not ? I will shew how to compound some, and by those you may by practice find out and invent infinite more, I shall instance in these following. As,

*A Violet.*

*A Lead-colour.*

*Flame-colour.*

*Scarlet.*

*Light-green*

*Purple.*

*A Bay-colour.*

*A Murrey.*

To

To make a *Violet-colour.*

*Indico, White, and Lake* make a good *Violet-colour*; you may make it lighter or darker at pleasure, as you may all other compounded Colours.

*Lead-colour.*

*Indico and White* make a *Lead-colour.*

*Colour for Flaming fire.*

*Red-lead and Masticote*, heightned with *White.*

*Scarlet-colour.*

*Red-lead, Lake and Vermilion*, very little or no *Vermilion*, for it is not good in Limning.

*Light-green.*

*Pink and Smalt*, with *White* to make it lighter, if you require it.

*A Purple-colour.*

*Indico, Spanish-brown, and White.*

*A Bay-colour.*

*Spanish-brown and White.*

*A Murrey-colour.*

*Lake and White* make a *Murrey-colour.*

Of these infinite others may be made, but I leave them to your own ingenuity to find out, which with little practice you will soon do. The next thing you shall be informed in, is how to prepare your Table for Limning, and fit all things for your work, which shall be declared in the next Chapter.

## C H A P. III.

*How to prepare a Table for a Picture in small for Limning, to make choice of your Light, the manner of Sitting in respect of Position and Distance, and what necessary Instruments are to lie by you when you are at work.*

WE now draw pretty near to our intended purpose, viz. Miniture or Limning to the life in Water-Colours : but

SECT. I. *How to prepare a Table for a Picture in small.*

LET pure fine Paste-board, such as the ordinary playing Cards are made of, you may have of what size and thickness you please, and very finely slick'd and glazed, at the Card-makers : Take a piece of this Paste-board of the size you intend your Picture, then take a piece of Parchment of the finest and whitest you can get, which are the skins of abortives or castlings, cut a piece of this skin of equal bigness with your Paste-board, and with thin white Starch new made paste the Parchment to the Paste-board, with the out-side of the skin outermost; lay on your Starch very thin and even; then your Grinding-stone being made very clean, lay the Card thereupon with the

the Parchment-side downwards, and as hard as you can, rub the other side of the Paste-board with a Boars tooth set in a stick for that purpose, when it is through drie it is fit to work upon.

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### SECT. II. *Of your Light.*

C oncerning your *Light*, let it be fair and large, free from being shadowed with trees or houses, but a clear sky-light, let it be a direct light from above, and not a traverse-light; let it be a Northerly and not a Southerly light, for the Sun shining either upon you, your work, or the partie sitting, will be very prejudiciale; as your room must be light, so let it be also close and clean. And observe, that you begin and end your work by the same light.

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### SECT. III. *Of the manner of Sitting.*

L et your Desk on which you work be so situate, that when you sit before it your left arme may be towards your light, and your right arme from it; that the light may strike in sideling upon your Work. Thus for your own sitting.

Now for the manner of the parties sitting that is to be Drawn, it may be in what posture he or she shall design; but let the posture be what it will, let it not be above two yards off you at the most, and level with you; but if the partie be tall, then above.

F

Mark

Mark well when the party that sits moveth, though never so little, for the least motion of the body or face, if not recalled, may in short time cause you to run into many errors.

The Face of a party being finished, let him stand and not sit to have his posture drawn, and that at a farther distance than two yards, *viz.* four or five yards.

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**SECT. IV.** *Of such necessaries as are to lie by you while you are at work.*

1. You must have two small Sawcers or other *China-dishes*, in either of which there must be pure clean Water; the one of them is to wash your Pencils in being foul, the other to temper your Colours with when there is occasion.

2. A large, but clean, fine and dry Pencil, to cleanse your work from any kind of dust that may by accident fall upon it: such Pencils they call *Fitch-Pencils*.

3. A sharp Pen-knife to take off hairs that may come from your Pencil, either among your Colours or upon your Work, or to take out spots that may come to fall upon your Card.

4. A Paper, having a hole cut therein, to lay upon your Card to cover it from dust, and to rest your hand upon, to keep the soil and sweat of your hand from sullying your Parchment, and also to try your Pencils on before you apply them to your Work.

Work. Let your Sawcers of Water, your Pen-knife and Pencils lie all on your right hand.

5. Have a pretty quantitie of Carnation (as some call it,) or Flesh-colour, somewhat lighter than the Complexion of the party you are to draw, tempered up in a shell by it self with a weak Gum-water. If it be a Fair complexion, White-lead and Red-lead mixed. If a Swarthie or Brown complexion, to your White and Red-lead add a quantitie of Masticote, or *English-Oker*, or both if occasion be. But whatever the Complexion be, be sure you temper your Flesh-colour lighter than the partie; for by often working upon it you may bring it to its true colour, it being first too light; but if it be first too sad, there then is no remedy.

6. Having prepared your Flesh-colour, take a large Shell of *Mother of Pearl*, or a *Horse-Mussel-Shell*, which any *Fisherman* will help you to, and therein (as *Painters* in Oyl dispose their Colours upon their Pallat for their working of a Face, so must you) place your several Shadows in this Shell in little places one distinct from another.

Note, that in all your Shadows you must use some White, wherefore 1. lay a good quantitie of White by it self, besides what the Shadows are first tempered with. 2. For *Red* for the Cheeks and Lips, temper Lake and Red-lead together, some use Vermilion, but I like it not. 3. For your *Blew* Shadows, as under the Eyes, and in Veins, &c. Indico and White, or Ultamarine and White. 4. For your *Gray*, faintish Shadows, take White *English-Oker* and Indico, or sometimes Masticote. 5. Or

*Deep shadows*, White, English-Oker, and Umber. 6. For *Dark-shadows* in mens Faces, Lake and Pink, which make an excellent fleshy shadow. Many other Shadows you may temper up, but these are the chief; your own judgement, when you look upon the partie to be Drawn, will best direct you, and inform your fancie better than a thousand Words.

Thus are you absolutely prepared of all necessaries, it is now fit time to go to work; and first we will begin with a Face.

#### C H A P. IV.

##### *Of the Miniture or Limning of a Face in Water-Colours.*

**H**aving all things in a readiness, according to the directions before delivered, upon that part of your Card where you intend the Face of your picture to be, lay that part of the Card over with your Colour that you have before prepared, answerable to the Complexion of the partie; it being well tempered, pretty thin, with a pencil bigger than ordinary, spread your Colour very even and thin, free from hairs or other spots, in your Pencil, over the place where you are to make the Face of your Picture. The Ground being laid, you may begin the Draught, the partie being ready to sit. Now to the finishing of a Face there will require three Operations or Sittings at the

the least. At the first sitting you do only dead Colour the Face, and this takes about two hours time. At the second sitting you are to go over the Face more curiously, observing whatsoever may conduce to the graces or deformities of the partie to be Drawn, together with a sweet dispose and couching of the Colours one within another, and this sitting will take up some four or five hours. At the third sitting you may finish the Face, this takes up some three hours time; in which you perfect what was before imperfect and rough, in putting the deep and dark shadows in the Face; as in the Eyes, Eye brows hair, and Ears, which things are the last of the Work, and not to be done till the Hair-curtain or the back-side of the Picture, as also the Drapery be wholly finished. Of these three sittings or operations we shall make three Sections, as followeth: Then in the next Chapter shew how the Drapery and other ornaments are to be performed: then in the next Chapter something of *Landscape* in Miniture, or Limning, and so conclude.

## SECT. I. *At the first Operation or Sitting.*

**Y**our Ground for the general Complexion being laid, the first work at your first sitting must be to draw the Porphile or out-lines of the Face, which you must do with Lake and White mingled; draw it very faintly, so that if you miss of

your Proportion you may alter it with a deeper mixture of the same Colour.

The proportion of the Face being drawn, add to the former colour some Red-lead, temper it to the colour of the Cheeks, Lips, &c. but faintly, for (as I said before) you cannot lighten a deep Colour when you would. You must now put in the Red shadows in their due places, as in the Cheeks, Lips, tip of the Chin, about the Eyes, the tip of the Ears, and about the roots of the Hair. All these Shadows must be put in, not with the flat of the Pencil, but by small touches, after the manner of Hatching; in this manner going over the Face, you will cover your ground with these and the following shadows. In this Dead-colouring you need not be overcurious, but strive to imitate Nature as near as may be, the roughness of the Colours may be mended at the second Operation.

Having put in your Red shadows in their due places, put in next your faint Blew shadows about the corners and balls of the Eyes, and your Grayish blew shadows under the Eyes and about the Temples; work these sweetly and faintly all over by degrees, heightning your shadows as the light falls; as also those harder shadows in the dark side of the Face, under the Eye-browes, Nose, Chin, and Neck, with some stronger touches in those places than on the light side of the Face. Bring all your Work together to an equal roundness, and give perfection to no particular part at this time, but view your object well, and see how near you hit the Life, not only in seeming likeness, but in roundness boldness of posture, colouring, and such like.

Having

Having wrought your fainter shadows into the Red ones before laid, you may now have a touch at the Hair, disposing of it into such curls, folds, or form as shall best grace the picture, or please the partie. You must only draw the Hair with some colour suitable to the life, fill up the empty and void places with colour, and deepen it somewhat more strongly than before in the deepest shadowed places. And let this be your first operation.

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### SECT. II. *At the second Operation or Sitting.*

AT the second sitting let the partie sit in the same place and posture as he did at the first sitting, then observe and delineate with your Pencil those varieties which Nature affords you; and as you did them but rudely before, you must now with the same Colours, in the same places, by working drive and sweeten the same Colours one into another, so that no lump of Colour, or any rough edge may appear in your whole work, and this work must be performed with a Pencil somewhat sharper than that which you used before, so as your Shadows may be soft and smooth.

Having made this progress in the Face, leave it for this time, and go to the back-side of your Picture; which is sometimes a piece of Landskip, but most commonly a Curtain of blew or red Sattin. If it be of blew Sattin, temper as much Bise in a shell as will cover a Card, let it be moist, but well bound with Gum; then with a Pencil draw the Porphile or

out-line of your Curtain, as also of your Picture, then with a large Pencil lay over carefully, but thin and aerly, the whole ground you mean to lay with Blew; then afterwards again with a large Pencil, as before, lay over the same again with a substantial bodie of colour; in doing of which you must be expeditious, keeping your Colour alwayes moist, letting no one part thereof be dry till you have covered the whole.

If your Curtain be Crimson, then trace it out with Lake, and lay the ground with a thin colour, then where your strong lights and reflexions fall, there lay your lights with a thin and Waterish colour, and while the ground is yet wet, with a strong and dark colour tempered reasonable thick, lay the hard and strong shadows close by the other lights.

After you have thus laid the back-side of your Picture with Blew, or Red, or any other Colour, lay your Linnen with a fair White, and the Drapery likewise flat of the colour you intend it.

Then repair to the Face again, and view your object well, and see what shadows are too light or too deep for the Curtain behind, and the Linnen and Drapery may somewhat alter the propertie to the eye, and make the Picture appear otherwise than it did when there was only the colour of the Parchment about it; I say, view your object well, and endeavour to reduce each Shadow to its due perfection: then draw the lines of the Eye-lids, and shadow the entrance into the Ear, the deepnes of the Eye-browes, and those more eminent notes and

marks

marks in the Face, and these must be done with a very curious and sharp Pencil.

The Face done thus far, go over the Hair, heightening or deepning it as it appears in the life, casting over the ground some loose hairs, which will be pleasing, and make the Picture stand as it were at a distance from the Curtain.

To shadow your Linnen, use Black, White, a little Yellow, and less Blew; the Black must be deepned with Ivory-black, with which mix a little Lake and Indico. And thus far have we proceeded at the second operation.

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### S E C T. III. *At the third Operation, or Sitting.*

The third and last operation of the Face will be wholly spent in giving of strong touches where you see cause; and in observations necessary for the rounding of the Face, which will better be seen how to perform now, than before the Curtain, Drapery, and Linnen were laid. In this last sitting observe very diligently and exactly whatever may conduce to similitude, which is a main thing, as Sears or Moles in the Face, &c. casts of the Eye, circumflexions or windings of the mouth. Thus much for the third operation and finishing of the Face.

## C H A P. V.

*Of Drapery, and other ornaments belonging to  
a Picture in Miniture.*

**T**H E Face being compleatly finished, and the Apparel rudely put on, let us now come to shew how to settle them in their right geers, (as the saying is,) as also to put on such Ornaments as are usual in Pictures of this nature. And these shall be expressed in the Sections following.

S E C T. I. *Of Drapery in Limning.*

**H**aving laid a good, fat, and full Ground all over the Drapery you intend to make; if Blew, then all over with Bise smoothly laid: the deeping must be Lake and Indico, the lightning White, very fine, faint, and fair, and in the extreme light places. What hath been said of this *Blew Drapery*, the like is to be understood of all other Colours.

It is rare to see Drapery expressed by lightning of it with fine Shell-Gold, with which it must be hatched and washed, what a lustre it gives to well-coloured Drapery, either Crimson, Green, or Blew, but much more if with the Ground it self you mix Gold when you lay it on.

S E C T.

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SECT. II. *Of other Ornaments in Picture.*

1. If the Body you are to draw be in Armor, lay liquid Silver all over for your ground, well dried and burnished, shadow it with Silver, Indico, and Umber; work these shadows upon the Silver as the life directs you.

2. For Gold Armor, lay liquid Gold as you did the Silver, and shadow upon it with Lake, English Oker, and a little Gold.

3. For Pearls, your ground must be Indico and White; your shadows Black and Pink.

4. For Diamonds, lay a ground of liquid Silver, deepen it with Cherrystone and Ivory-black.

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C H A P. VI.

*of L A N D S K I P.*

THE bounds and limits of *Landscape* are inexpressible, they being as various as fancy is copious; I will give you only some general Rules for painting of Landscape, and so conclude this third Book.

In painting of any Landscape alwayes begin with the Sky, the Sun-beams, or lightest parts first; next the Yellow beams, which compose of Masticote and White; next your Blew skies, with Smalt only. At your first colouring leave no part of your ground

ground uncovered, but lay your Colours smooth and even all over. Work your Sky downwards towards your Horizon fainter and fainter, as it draws nearer and nearer to the earth, you must work your tops of Mountains and objects far remote, so faint that they may appear as lost in the Air; Your lowest and nearest Ground must be of the colour of the earth, of a dark yellowish brown Green, the next lighter Green, and so successively as they lose in their distance they must abate in their colour. Make nothing that you see at a distance perfect; as if discerning a Building to be fourteen or fifteen miles off, I know not Church, Castle, House, or the like; so that in drawing of it you must express no particular sign, as Bell, Portcullis, or the like; but express it in colours as weakly and faintly as your eye judgeth of it. Ever in your Landskip place light against dark, and dark against light, which is the only way to extend the prospect far off, occasioned by opposing light to shadow; yet so as the shadows must lose their force in proportion as they remove from the eye, and the strongest shadow must alwayes be nearest hand.

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O F

## P A I N T I N G in O Y L.

### The Fourth Book.

**P**AINTING in Oyl is of most esteem of any other Painting, and indeed it requireth the greatest judgement in the performance, of any other kind of Painting. I shall (according to the weakness of my ability) deliver unto you such Rules and directions, as being well minded and practised, may in a short time make you a good proficient therein: Presupposing you have read the three foregoing Books, especially the First and Third, and that you understand Draught of any kind, and also the nature (if not the manner of working with) Water-colours, yet at least have read the Rules there delivered concerning the use of them, you may fall to practise the Painting in Oyl; in which observe the directions following.

C H A P.

## C H A P. I.

*Of the Names of your Colours, and how to Grind  
and order them.*

## Names of the Colours in Oyl.

## BLACKS.

*Lamp-black.*  
*Seacoal-black.*  
*Ivory-black.*  
*Charcoal-black.*  
*Earth of Colen.*

## WHITES.

*White-Lead.*

## GREENS.

*Verdigrease.*  
*Terra vert.*  
*Verditer.*

## BLEWS.

*Bise*  
*Indico.*  
*Smalt.*  
*Ultamarine.*

## REDS.

*Vermilion.*  
*Red-Lead.*  
*Lake.*  
*India Red.*  
*Ornotto.*

## YELLOWS.

*Pink.*  
*Masticote.*  
*English Oker.*  
*Orpiment.*  
*Spruse Oker.*

*Spanish Brown, Burnt Spruse, Umber.*

These are the chief Colours that are used in Painting in Oyl, the most part of which are to be grownd very fine upon your Stone with a Muller, with Linseed-Oyl: some must be Burnt before they be Grownd; others must be only temper'd upon the Pallat, and not grownd at all.

The Colours to be burnt are these:

*Ivory, Spruse, Oker, and Umber.*

The

The Colours that are not to be Grownd at all, but only tempered with Oyl upon your Pallat, are these:

*Lamp-black, Verditer, Vermilion, Bise, Smalt, Masticote, Orpiment, Ultamarine.*

All the rest are to be Grownd upon your Stone with Linseed-Oyl; only White-Lead, when you are to use that for Linnen, you must grind it with Oyl of Walnuts, for Linseed-Oyl will make it turn yellow.

Those Colours that are to be Burnt, you must put them into a Crucible, such as *Gold-smiths* melt their Silver in, cover the mouth thereof with clay, and there let it burn red hot, when it is cold you must grind it upon your Stone with Oyl.

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## C H A P. II.

*Of your Easell, Straining-frame, Cloth, Pallat, Pencils, and Stay.*

I Might here describe the form and fashion of your *Easell* and *Pallat*, but I think I need not; for he that ever saw a Painter at work, must needs see these two Instruments, but what they are I shall here describe.

An *Easell* is a frame made of wood, not much unlike a Ladder, only the sides are flat, and full of holes on either side, to put in two pinns to set your Work upon higher or lower at pleasure; it is broader at the bottom than at the top, and on the back-

back-side there is a Stay, by the help of which you may set in the middle of any room, more upright or sloping at pleasure; when you do not use it, you may clap it together and set it behind any door; or hang it against any wall out of the way.

A *Pallat* is a thin piece of wood, and is necessary to be about twelve or fourteen inches long, and nine or ten inches broad, in form of an egge, at the narrower end whereof is a hole made also of an oval form, about an inch and a half in length, and an inch broad; this hole is to put in your thumb of your left hand, upon which you must alwayes hold it when you are at work; out of the side of your Pallat neer unto the thumb-hole is cut a notch, by the side of which the Pencils which you hold in your left hand also may come through, by which means you may take any of them out, or put another in at pleasure. These Pallats ought to be very thin and light, especially at the broid end, but toward the thumb-hole somewhat thick, yet not above half a quarter of an inch; the best wood to make them of is Pear-tree or Walnut-tree.

A *Straining-frame* is nothing else but a frame made of wood; to which with nails you must fasten your Cloth that you are to paint upon; of these Frames you should have of several sizes, according to the bigness of your Cloths.

By your Cloth I mean *Cloth primed*, I could teach you how to prime it, but it is a moiling work, and besides, it may be bought ready primed cheaper and better than you can do it your self. Few Painters (though all can do it) prime it themselves, but buy it ready done.

*Pencils,*

Pencils, what they are I need not tell you, but what sorts there are I will, because I shall have occasion to call them sometimes by their names in the Discourse following. There are of all bignesses, from a pin to the bigness of your finger.

There are several sorts, thus called:

Ducks Quill fitted.

Ducks Quill pointed.

Bristle.

Swans Quill fitted.

Swans Quill pointed.

Bristle.

Hairing, or Jewelling-Pencils.

Goose Quill fitted.

Goose Quill pointed.

Bristle.

Bristle Pencils, some in Quills, others in Tinn-cases, bigger than Quills, and others in Sticks.

Your Stay or Mol-stick is nothing else but a stick of Brazel or such like wood that will not easily bend, about a yard in length, at one end whereof tie a little ball of Cotton hard in a piece of Leather about the bigness of a Chesnut; this stick when you are at work you must hold also in your left hand, and laying the end which hath the leather ball upon your cloth or frame, you may rest your right arm upon it all the while you are at work. Thus being furnished with all manner of Colours, and other necessaries here described, you may begin to practise when you please; we will begin with a Face, in which observe the directions in the following Chapters.

## C H A P. III.

*How to order your Colours upon your Pallat, and how to temper Shadows for all Complexions.*

**D**ispose your single Colours upon your Pallat in this order, laying them at a convenient distance one from another, so that they be not apt to intermix. First lay on your Vermilion, then Lake, then burnt Oker, India Red, Pink, Umber, Blacks, and Smalt: lay the White next to your thumb, because it is oftner used, for with it you lighten all your Shadows; next to your White lay a stiffe sort of Lake: this done your Pallat is furnished with the single Colours belonging to a Face; then for the tempering of your Shadows to all Complexions, observe the following Directions.

I. *For a Fair Complexion.*

Take a little White, and twice as much Vermilion, and as much Lake, temper these well together upon your Pallat with the flat blade of your knife; lay aside by it self on your Pallat the greatest quantity of this to be used for the deepest Carnation of the Face.

Put more White to that which remains, and temper that well with your knife, and being well tempered lay some of that aside also for your lighter Carnation.

To

To the remainder add yet more White, and temper it upon your Pallat till you have brought it to the lightest colour of your Face.

Your Carnations being thus tempered, and orderly laid upon your Pallat, prepare your faint Shadows. For which,

Take Sma:lt, and mix it with a little White, which may serve for the Eyes; lay aside the greatest quantity, and to the rest add a little Pink, this well tempered and laid by it self will serve for the faint greenish shadows in the Face.

Now prepare your deep Shadows; for which take Lake, Pink, and Black, of each a like quantity, temper all these together.

If the parties Face you are to draw, or the Picture you are to copie do require the Shadows to be redder than what you have tempered, then add a little more Lake; if yellower, add a little more Pink; if blewer or grayer, add a little more Black.

This done, your Pallat is prepared with Colours for any fair Face.

## 2. For a more Brown or Swarthy Complexion.

Lay your single Colours on your Pallat as before, and in like manner temper them, only amongst your White, Lake, and Vermilion, put a little quantity of burnt Oker, to make it look somewhat Tawny.

Amongst your heightnings temper a little yellow Oker, onely so much as may just turn the Colours.

For your very faint and very deep Shadows, the same as before.

*3. For a Tawny Complexion.*

The general Colours must be the same as before, only the Shadows are different, for you are to prepare them of Umber, and burnt Oker, which shadow will fit these Complexions best; if the shadow be not Yellow enough, add more Pink to it.

*4. For an absolute Black Complexion.*

10

Your dark Shadows must be the same as before; but for your heightnings, you must take White, burnt Oker, Lake, and Black, put but a little White in at first, but work it up by degrees, till you come to the lightest of all, as you did the contrary Colours for a fair Complexion.

Here note, that the single Colours at first laid upon your Pallat being tempered together according to the former directions, serve for shadows for all Complexions.

Thus much concerning the disposing and ordering of your *Pencils*, and what *Pencils* you are always to have in your hand all the while you are painting of a Face.

---

C H A P. I V.

*what Pencils are usefull for the Painting of  
a Face, and how to dispose them.*

**E**very Pencil must have a stick of about nine inches long put into the Quill thereof, the farther end of which stick must be cut to a point.

When you are to begin any Face or other picture, lay together two Ducks quill-fitch-Pencils, and two Ducks-quill-pointed-Pencils, also two Goose-quill fitched and two pointed, two Bristles both alike; one Swans-quill fitched, and another pointed; then a larger Pencil than any of these, which no Quill will hold, and therefore they make cases of Tinn to put them in, you must have one of these Fitted, as also a bristle of the same bigness.

Your Pencils being in a readiness, when you are to use them, your Pallat being upon your thumb, you must take your Pencils in your right hand, and put the ends of their sticks into your left hand, keeping (when you work) the hairy ends at a distance, one from touching another, lest the Colours in them intermingle.

Your Pallat of Colours being prepared, and your Pencils and Molstick also in a readiness, you are to use them as is hereafter taught.

## C H A P. V.

*How to Paint a FACE in Oyl-Colours.*

**Y**OUR Cloth being ready primed, and strained upon your Frame, take a knife, and with the edge thereof scrape over your Cloth, lest any knots or the like should be upon it which may disryme your Work.

Your Cloth being ready, draw forth your Easell, setting your Frame & Cloth upon it at a convenient height, so that you sitting upon a stool, ( level with the party you draw ) may have the face of the picture equal, or somewhat higher than your own. Then set your Easell according to your light, which let be the same as I have described in *Limning*, namely, a Northerly light, free from shade of trees or houses, but let it come in on your left hand, and so cast the light towards the right hand.

All things being now in a readines, let the party you are to draw sit before you in the Posture he intends to be painted, about two yards distant from you.

Then with a piece of Chalk pointed, draw the proportion of the Face upon the Cloth, with the place of the Eyes, Nose, Mouth, Ears, Hair, and whatsoever the posture affordeth the Eye; here is no curiosity in this, only see that you keep a good *decorum*, if you miss a good deal, the Colours will bring all to rights; but I suppose you know already whether

whether the design will make a Face proportionable to the parties. And so of that no more.

Your Design being drawn in Chalk, take one of your Swans-quill-pointed-Pencils, and some of your lightest Colour, and begin with the lightest parts in the Face, as the *heightning* of the *Forehead*, the *Nose*, and the *Cheek-bone* of the lightest side: when you have done the lightest parts, do the mean parts next; that is, those parts not altogether so light as the other, as the *Cheek-bone* of the fore-shortning or dark side, the *Chin*, and over the upper *Lip*; and so proceed gradually till you come to the Reddest parts of all.

Then lay your faint Greenish shadows in convenient places, and where you see cause to moderate harder shadows; but you must have a care you put not Green shadows where Red are required.

Thus all your faint or light beginnings being put in, take one of your Goose-quill-pointed-Pencils, or one of your Ducks-quill-fitched, and begin at the Eyes to shadow with Lake, because you may easily overcome it if it should chance to be wrong: I do not mean you should go all over the face with Lake, but trace out these parts of the Face therewith, as the *Eyes*, *Nose*, *Mouth*, *Compass* of the *Ear*, &c. This tricking or tracing out of these parts with Lake is to be done before you lay on any Colour, wiping it lightly over with a linnen rag, to prevent the overcoming of the other Colours.

Having thus put in all your Colours both light and dark, take a great Fitch-pencil, either that in the plate, or that in the stick, and sweeten the Co-

lours therewith; by sweetning, is meant the going over these several Shadows thus laid with a clean soft Pencil, which with orderly handling will drive and intermix the Colours one into another, that they will appear as if they were all laid on at once, and not at several times. If this great fitch'd Pencil be too big, you may use a lesser; but note, that the bigger Pencils you use, the sweeter and better your Work will lie; and it is as easie to handle a great Pencil as a little one, if you use your self to it.

At your Second sitting (for this is enough at once) begin again with your clean Pencils of such bigness as the piece you are to work upon does require. Then the party sitting in the same position, and at the same distance as before, the light also being the same, Observe well the party, and see what defects you find in the Work at your first sitting, and amend them; then heighten or deepen your Shadows according as you see occasion.

This done, take a Goose-quill Bristle and put in the Hair about the Face, and rub in the greater Hair with the greater Bristle, and heighten it up with your Goose-quill Pencil.

C H A P. VI.

*Of Garments of several colours, and of their proper Colouring.*

**T**H E next thing I shall speak of, shall be of *Drapery or Garments*, and the true and proper manner of Colouring of them.

And

*I. For a Red Garment.*

For a light-red Garment, first dead-colour it with Vermilion, and when you would finish it, glaze it over with Lake, and heighten it with White.

*For a Scarlet.*

If you will have your Garment Scarlet, Vermilion it self must be the lightest, and it must be deepned with Lake or India Red.

*For a Crimson Velvet.*

Lay Vermilion, burnt Oker, or India Red, for the dead colour, glaze it with Lake, and touch it up with Vermilion.

*A sad Red.*

*Indian Red heightned with White.*

Note, that all your deepnings should or ought to be deepned with Black, Pink, and Lake, tempered together.

*2. For*

*2. For Green Garments.*

The best Green for holding is Bise and Pink, heighten it with Masticote, and deepen it with Indico and Pink.

*For Green Velvet.*

Lay the dead colour of White with a little Lamp-black, glaze it with Verdigrease, deepen it with Indico and Pink, and heighten it with Pink and White.

*3. For Blew Garments.*

Take Indico and White, first lay the White in its due places, and then your mean colour, namely Indico and White mixed in their due places, then deepen it with Indico only, and when it is dry glaze it with Ultamarine, which will never fade; you may glaze it with Smalt or Bise; but Smalt will turn Black, and Bise will turn Green.

But if you will have a Blew Garment without glazing, lay the ground as before, with Indico and White, heighten and deepen it with the same Colours.

*4. For Yellow Garments.*

For a Yellow Garment, Masticote, yellow Oker, and Umber; lay the dead colour of Masticote and White in the lightest places, Oker and White in the mean places, and Umber in the darkest places; when it is dry glaze it with Pink.

If you would not glaze it, use only Masticote heightned

heightned with White, and deepned in the mean shadows with Oker, and in the deep shadows with Umber.

5. *For Black Garments.*

Let the dead colour be Lamp-black, and some Verdigrease; when that is dry, go over it with Ivory-black and Verdigrease; before you go over it the second time heighten it with White.

6. *For Purple Garments.*

Oyl Smalt, tempered with Lake and White-Lead, heighten it with White-Lead.

7. *Orange Colour.*

Red-Lead and Lake, lay the lightest parts of all with Red-Lead and White, the mean parts with Red-Lead alone, the deeper parts with Lake, if need require heighten it with White.

8. *Hair Colour.*

Umber and White for the ground, Umber and Black for the deeper shadows, Umber and *English* Oker for mean shadows, for heightning White with a little *English* Oker.

## C H A P. VII.

*To temper Colours for several occasions.*

**I**N Landskip, variety of Colours are required; I will therefore begin with those first.

*Colours for the Skie.*

For the Aiery skie that seems a great way off, take Oyl-Smalt or Bise, and temper it with Linseed-Oyl, for a Red sky use Lake and White, and for Sun-beams or Yellow clouds appearing at Sun-rising or setting, use Masticote and White; for Clouds in a storm, or for a Night-sky use Indico deepned with Black, and heightned with White.

*Colours for Trees.*

For some use Lake, Umber, and White; for others Charcoal and White, for others Umber, Black, and White, with some Green, you may add Lake, and sometimes Vermilion among your other Colours.

*Of several Greens in Landskip.*

For a light Green use Pink and Masticote heightned with White.

For a sad Green, Indico and Pink heightned with Masticote.

You may make Greens of any degree whatsoever.

In Painting of Landskip I shall say nothing here, that

that which I have already said in the Sixth Chapter of the Book of *Limning* being sufficient.

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*Things meet to be known.*

**O**YL-Colours if they be not used presently, will have a skin grow over them, and in time will quite dry up; wherefore if you have any quantity of Colours grownd, to keep them from skinning or drying, set them in a vessel of fair water, three or four inches under water, and they will not skin nor dry.

If your Grinding-stone be foul, grind *Curriers* shavings upon it, afterwards crumbs of bread, and it will fetch off the filth.

If your Pencils be foul, dip the ends of them in Oyl of Turpentine, and squeeze them between your fingers.

When you work in Oyl, let a little pot of Oyl stand by you, into which dip your Pencil, and streak it by the side of the pot, and the Colour will go out that is within it, and you may use it with another Colour.

---

*The Discovery.*

*How to Cleanse any Old Painting, so as to preserve the Colours; with cautions to those that through ignorance have instead of Cleansing, quite Defaced or irrecoverably lost the Beauty of good colours in an Old piece of Painting.*

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*To Cleanse any old Picture in Oyl.*

**T**ake your purest white Wood-ashes you can get, and sift them very well in a fine lawn sieve; or else some Smalt, which is as some call it Powder-blew, and with a fine Spunge and fair water wash the Picture you intend gently over, but be sure you haye a great care of the Shadows; for by the ignorance of many persons many good Picture hath been abused; but having carefully wash'd it, as before mentioned, take some of these Vernishes, of which there be several, but some are more prejudicial than others, therefore choose those which may upon occasion be wash'd off again.

As Gum-water purely strain'd, or pure Size-gelly, or the whites of Eggs well beaten; all these will wash off.

Your common Vernish will vernish over any dark part of a Picture.

But your distill'd Vernish is the best of all; this will not wash off.

But observe, that when you have wash'd the Picture,

cture, you must dry it very well with a clean cloth  
very dry before you vernish it.

Divers there be which have pretended to be well  
skill'd or knowing in the Cleansing of Pictures, and  
skill in Painting, and have undertaken the spoyle  
of things they have been unworthy to understand ;  
as with Sope, or Ashes, and a Brush, and divers  
other inventions, by their ignorance to deface and  
spoyl those things which otherwise might have been  
worth great value , and in stead of hindering the  
Painter of his employment , have indeed created  
them new work.

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O F



O F  
**WASHING or COLOURING**  
O F  
**Maps, and Printed Pictures.**

The Fifth Book.

**T**O Wash *Maps* or *Printed Pictures* is nothing else but to set them out in their proper Colours, which to perform well is a very fine thing. I have seen a Printed Picture printed upon fine Parchment, only washed with Water-colours, which could hardly be distinguished from a Limned piece, and there are many now in *England* very excellent at it. If any ingenious spirit that delights in Picture, and hath not time or opportunity to study to be a proficient in Painting in Oyl or Limning, I would advise him to practise this, which is very delightfull, and quickly attained; the manner of performing of it I shall here in this Book teach.

C H A P.

C H A P. I.

What things are necessary to be always ready for  
Washing of Maps or Pictures.

SECT. I. Of Colours for Washing.

**H**ERE note, that all the Colours that are mentioned in the Second Chapter of the Third Book concerning *Limning in Water-Colours*, are all to be used in Washing or Colouring of Pictures, wherefore provide your self of those Colours, grind them, wash them, and steep and temper them according as you are directed in that Second Chapter; I say, you must have all these Colours in a readiness; and for Colouring of Prints some other Colours, namely these that follow, which how to order I will anon shew you.

Colours to be used in Washing, which are not used in Limning.

**BLACKS.** **REDS.** **BLEWS.**

*Printers Black.* *Vermillion.* *Verditure.*

*Or, Rosset.* *Litmos.*

*Franckford-Black.* *Flory.*

so be had of the *Plate-Printers.*

H

YEL-

# The Excellency of

*YELOURS. Gumbooge, Yellow-berries, Orpiment.*

Also these;

*Brazeel and Log-Wood grownd, and Turnsoil.*

Of these Colours above mentioned, *Printers Black, Vermilion, Rosset, Verditeare, and Orpiment* are to be Grownd as is taught in the second Section of the second Chapter of the third Book, page 70. and therefore, I say, Grind them as you are there taught.

Now for the other Colours above mentioned, they are to be ordered several wayes, as followeth. And

## 1. Of *Litmos*, how to order it.

Take fine *Litmos* and cut it in small pieces, then lay it in steep the space of twenty four hours at least, in a weak Water of *Gum-Lake*, [The making of *Gum-Lake Water* is taught before in the first Chapter of the third Book, pag. 66.] it will be a pure Blew Water, good to Wash withall.

## 2. Of *Flory Blew.*

Take *Flory Blew* and grind it with the white of an Egg, [beat the white of the Egg with a spoon in a Porenger till it become a clear Water.]

*Flory* thus grownd, if you add thereto a little *Rosset*, it maketh a light *Violet-colour*.

If you mix with it both *Red* and *White Lead*, it maketh a *Crane-Feather-colour*.

It

It , and Pink, Masticore, or Gum-booge make a fair Green.

3. *Of Gum-booge.*

Take *Gum-booge* and dissolve it in fair spring-water, and it maketh a most beautifull and transparent Yellow.

4. *Of Yellow-Berries.*

Take *Yellow-Berries*, bruise them a little, and let them steep in Allum-water all night, in the morning you will have a very fair Yellow to Wash withall.

5. *Of Turnsoil.*

*Turnsoil* is made of pieces of Linnen cloth dyed of a kind of Violet-colour.

Take a dish and put some sharp Vinegar therein, together with your *Turnsoil*, then set the dish over a gentle fire in a chafingdish till the Vinegar boyl and be coloured, then take out the *Turnsoil* and squeeze it into the Vinegar ; to which put a little *Gum-Arabick* to dissolve ; it is an excellent good liquor to shadow upon any Carnation or Yellow.

6. *Of Brazeel.*

Take *Brazeel* grownd, to which put a quantity of small Beer, and as much Vinegar, set them in a pan upon a soft fire , and there let it boyl gently a good while, then put therein some fine powder of

Allum to raise the Colour, as also some Gum-Arabick to bind it; boyl it so long till it taste strong on the tongue; it maketh a very transparent Red.

### *7. Of Log-wood.*

If you boyl *Log-wood* grownd in all respects as you did your Brazeel, it will make a very fair transparent Purple-colour.

## S E C T. I I. *Of other necessaries.*

### *I. Of Allum-water, how to make it.*

**T**AKE a quarter of a pint of Allum, beat it to powder, and boyl it in a quart of fair Water till it be dissolved.

With this Water wet over your Pictures that you intend to colour, for it will keep the Colour from sinking into the Paper, and it will add a lustre unto the Colours, and make them shew fairer; and it will make them continue longer without fading: you must let the Paper dry of it self after you have wetted it, before you lay on there Colours, or before you wet it again; for some Paper will need wetting four or five times.

But if you intend to Varnish your Pictures after you have Coloured them, you must first Size them, that is, rub them over with white Starch new made with a Brush very fine, in stead of doing them with

Allum-

Allum-water, be sure you size it all over, or else the Varnish will sink through; if your Varnish be too thick, put into it so much Turpentine-oyl as will make it thinner.

### 2. How to make Size.

Take some Glew, and let it steep all night in water to make it the readier to melt in the morning, then set it on a coal of fire to melt, to try whether it be neither too stiff nor too weak, for the meanest is best; take a spoonfull thereof and set it in the air to cool, or fill a Mussel-shell of it, and let it swim in cold water to cool the sooner; if it be too stiff, when it is cold put more water to it, if too weak, then put more Glew to it; and when you use it make it luke-warm.

This is to wet your Cloths in, if you intend to paste your Maps or Pictures upon Cloth, you may use white Starch to wet your sheet, and wring it out and strain it upon a frame, or nail it upon a wall or board, so paste your Maps or Pictures thereon.

### 3. How to temper Gold to Write with a Pen or Pencil.

Take the sweepings of leaf-Gold, such as Bookbinders sweep off their Books, or leave-Gold it self, and with stiff Gum-water, with a pretty deal of white Salt, grind them very well together, and put it into a glas, and put a quantity of fair water as will sufficiently cover it, to make the stiff-

water dissolve, that so the Gold may settle to the bottom, and let it stand four or five dayes, then pour away the water and put clean water to it again, if you find the Gold dirty, refresh it again the third time, then pour it away and take clean water again, and a little Salt-Armoniack and great Salt, and put it in a gally-pot, and stop it very close, and let it stand a week, then take it out and put it into a piece of sheeps-skin when the grain is taken off, tie it up close, and hang it up that the Salt may fret from it; then take the Gold and temper it with the white of an Egg or Gum-water: so use it with Pen or Pencil.

#### 4. *Of Pencils.*

Provide *Pencils* of all sorts, both pointed and fitch; a large Brush to paste your Maps upon Cloth withall; another to Wet your Paper with Allum-water; a third to Starch the face of your Picture withall before you colour it; and a fourth Brush to Varnish withal.

## C H A P. I.I.

*Of other Colours for Washing, both Simple  
and Compounded.*1. *How to make a Green colour of Copper-plates.*

**T**AKE any shreds of Copper and put distilled Vinegar to them ; set them in a warm place until the Vinegar become Blew, then pour out that Vinegar into another pot well leaded, and pour more Vinegar upon the Copper, letting that stand until it be of a Blew colour, then pour it into the former liquor ; this you may do so often until you have liquor enough, then let the liquor stand in the sun or upon a slow fire till it be thick enough, and it will be a good Green.

2. *To make a Green another way.*

The best is Cedar-green, but that is dear, therefore you may take green Bise and steep it in Vinegar, then strain it through a linnen rag, then grind it well with fair water, and put to it a little Honey, and let it be well dried, and when you use it mix it with a little Gum-water.

3. *Another Green.*

Take the juyce of Rew, and a little Verdigrease,  
H 4 and

and a little Saffron, and grind them well together, and use it with a little Gum-water.

#### *4. For light Greens.*

*Sup-greens, Flower de Bise, or Tawny-green,* these need no grinding, only steep'd in fair water, *Verditer and Ceruss mixt with a little Copper-green,* makes a good light colour.

#### *5. To shadow Greens.*

*Indico and Yellow-berries will do very well.*

#### *6. Greens for Landscips and Rocks.*

Temper your Green with white Pink, Bise, Masticote, Smalt, or Indico, or Ceruss.

Blew Verditer mixt with a few Yellow-berries, make another Green.

#### *7. To make a Blew.*

There is *Venice-Ultamarine*, but this is very dear; there are Bisces of several sorts, deeper or paler; there is Smalt and Verditer; grind any of these with Gum-water.

#### *8. Of shadowing Blews.*

There is Indico, Litmos, or Flory, take any of these, they need no grinding, steep them in the lees

lees of Sope-ashes, when you use them put Gum-water to them with discretion.

#### 9. To make a Brown.

Take Ceruss, Red-Lead, English-Oker, and Pink,

#### 10. Spanish Brown.

Its a dirty colour, yet of great use if you burn it till it be red hot ; but if you would colour any hare, horse, or dog, or the like , you must not burn it, but to shadow Vermilion, or to lay upon any dark ground behind a Picture , or to shadow Berries in the darkest places , or to colour any wooden Poste, Wainscot, bodies of Trees, or any thing else of Wood, or any dark ground on a Picture.

#### 11. How to make an Orange-colour.

Red-Lead is the nearest to an Orange, put a few Yellow-berries into it, makes a good Orange.

#### 12. A Flesh-colour.

Take of White and a little Lake, and some Red-Lead mixed , you may make it light or red as you please, by adding more or less White in shadowing the Cheeks and other places, if you would have a swarthy complexion ; and to distinguish the Mans flesh from the Womans, mingle a little yellow Oker among your Flesh.

#### 13. Co-

*13. Colours for the Skie.*

Light Masticote, or Yellow-berries, and White for the lowest and lightest places; red Posset, White for the next degree; blew Bise and White for the other; and blew Bise for the highest, for want of Bise use Verditer; these must be worked together; you must not receive any sharpness in the edge of your Colour, and they must be so laid on, that you cannot perceive where you first began to lay them, you must so drown them one in another.

*14. To make colours for Precious stones.*

Verdigrease with Varnish makes an *Emerald*, and with *Florence Lake* it makes a *Ruby*, and with *Ultramarine* it makes a *Saphire*.

*15. Colours for Landskips.*

For the faddest Hills use burnt Umber, for the lightest places put some Yellow to the burnt Umber; and for the other Hills lay Copper-green thickned on the fire, or in the Sun; for the next Hills further off, mix some Yellow-berries with Copper-green, and let the fourth part be done with green Verditer; and the furthest, faintest places with blew Bise, and for want of that, with blew Verditer mingled with White for the lightest places, and shadowed with blew Verditer in the shadows indifferent thick; the Highwayes do with Red-Lead

Lead and White, and for variety use yellow Oker, and shadow it with burnt Umber, and you may use it for sandy Rocks and Hills; the Rocks you may do with several colours, in some places Black and White, in other places with Red-Lead and White, and some with Blew and White, and other colours, such as you judge are convenient, and do most resemble Rocks, and let them be pleasant colours; the Water must be black Verditer and White, shadowed with green and with blew Verditer; when the Banks cast a green shadow upon the Water, and when the Water is dark in the shadows, then shadow it with a little Indico and Green thickned, and some blew Verditer.

#### 16. *Colours for Buildings.*

When you colour Buildings, do it with as much variety of pleasant colours as possible can be imagined, yet not without reason, and let discretion rule you in mixing your Colours; in colouring of Buildings you may use sometimes White and Black for the Wall, Conduits, or other things; for Brick-houses and others you may use Red-Lead and White; when many Houses stand together, colour them with various colours as you can; about Buildings use sometimes Umber and White, and sometimes Lake and White, or Red-Lead and White for variety.

#### 17. *How*

17. *How to Shadow every colour in Garments,  
or Drapery.*

Take this Rule, that every Colour is made to shadow it self, or if you mingle it with White for the light, and so shadow it with the same colour unmingle with White, else take off the thinnest of the colour for the light, and so shadow it with the thickest bottom of the colour; if you will have your shadow of a darker colour, then the colour it self is to shadow the deepest places.

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### C H A P. III.

#### *General Rules to be observed.*

1. **S**Ap-green is only used to shadow other Greens, and not to be laid for a ground in any Garment.
2. Lake must not be shadowed with any colour, for it is a dark Red; but for variety you may shadow it sometimes with Bise, or blew Verditer, which will make it shew like changeable Taffata.
3. Blew Verditer is shadowed with thin Indico.
4. Blew Bise is shadowed with Indico in the darkest colours; Yellow-berries, the natural shadow for it is Umber, but for beauties sake it is seldom shadowed with Umber, but with Red-Lead, the darkest touches with Spanish-Brown; and for varieties

varieties sake its shadowed with Copper-green thick, and with blew Bise or blew Verditer.

*What Colours sets off best together.*

1. Whites are very usefull in all colours, and sets off Black and Blew very well; but Blacks are not much used, but upon necessary occasions in some things, as your judgement shall direct you.
2. Reds sets off well with Yellows.
3. Yellows sets off well with Reds, sad Blews, Greens, Browns, Purples.
4. Blews sets off well with Reds, Yellows, Whites, Browns, and Blacks; but Blews set not off well with Greens and Purples.
5. But Greens sets off well with Purples and Reds.

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*SECT. II. Directions for the Mixing of  
your Colours.*

**T**O mix any Colour, be carefull that you make it not too sad; when you mix your Colours be carefull you put not your Pencils out of one Colour into another, for it will spoil and dirty your other Colours, except you wash your Pencils clean.

When you mix any Colours stir them well about the water, being well coloured pour it out into a Shell, and stir the rest of the Colours and mingle them together; pour out the Colour first, that you may the better know what quantity of the fadder will serve.

*F N S.*